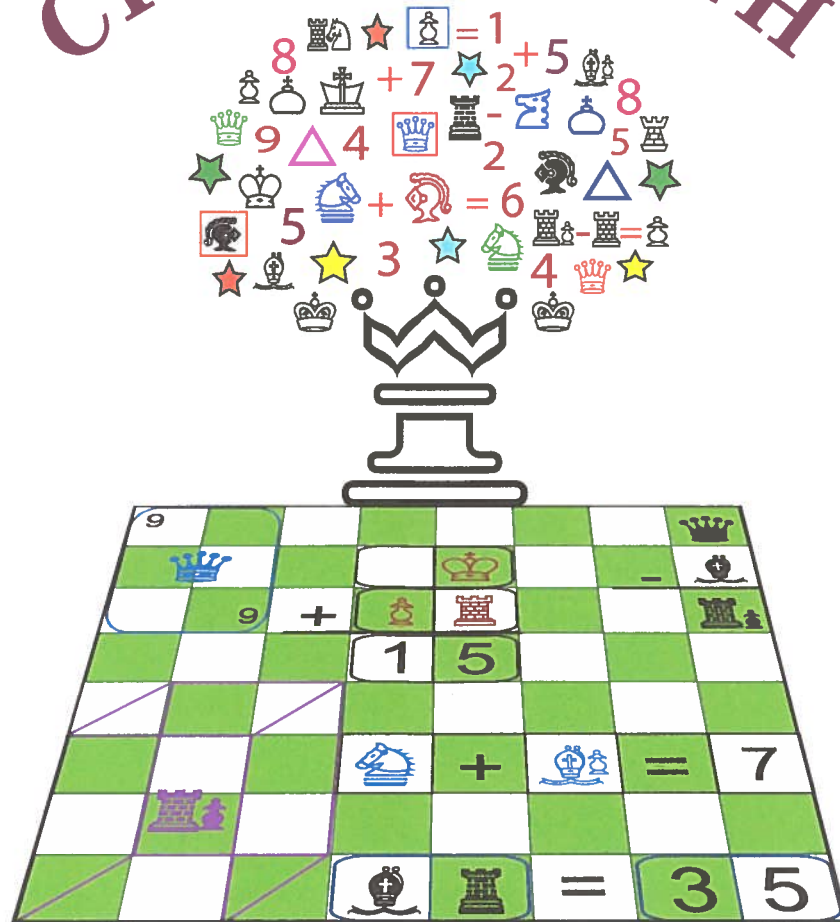


CHESS 4 MATH



“Play chess, learn math and train your mind.”

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ISBN 978-0-9997548-0-1

Welcome TO OUR CHESS & MATH JOURNEY



Dear Kindergarteners, Families, and Teachers:

Welcome to Chess 4 Math!

This exciting book is the beginning of an incredible journey, where you are going to learn mathematics and chess. The chess pieces are going to help you succeed academically and in your personal life. The game of chess is going to teach you how to use your mind more efficiently, organize your ideas, develop your critical thinking skills, and many more fundamental skills.

Dear teachers, thank you for choosing this fantastic curriculum.

As a teacher, I recognize how hard it is to keep the attention of our students actively engaged. I designed this book with the intention of providing students with an entertaining way to learn mathematics.

The book is grounded in the 2nd Standard for Mathematical Practice: “Reason abstractly and quantitatively,” as we manipulate the chess pieces as symbols that represent the numbers. All the activities are aligned with the Common Core Mathematics Standards.

The activities are designed to be “challenging” as a way to help our students develop their critical thinking skills. Therefore, your teaching skills are required to help students understand the activities.

In the teacher’s manual, I provide you with the answer key, and I explain in detail my experiences teaching this program.

Thank you for taking this significant step forward. It is going to help our students and our educational system in general.

Sincerely,

Ramón Miguel Lorente Pupo

A handwritten signature in black ink, reading "Ramón Miguel Lorente Pupo". The signature is written in a cursive style with a large, stylized initial "R".

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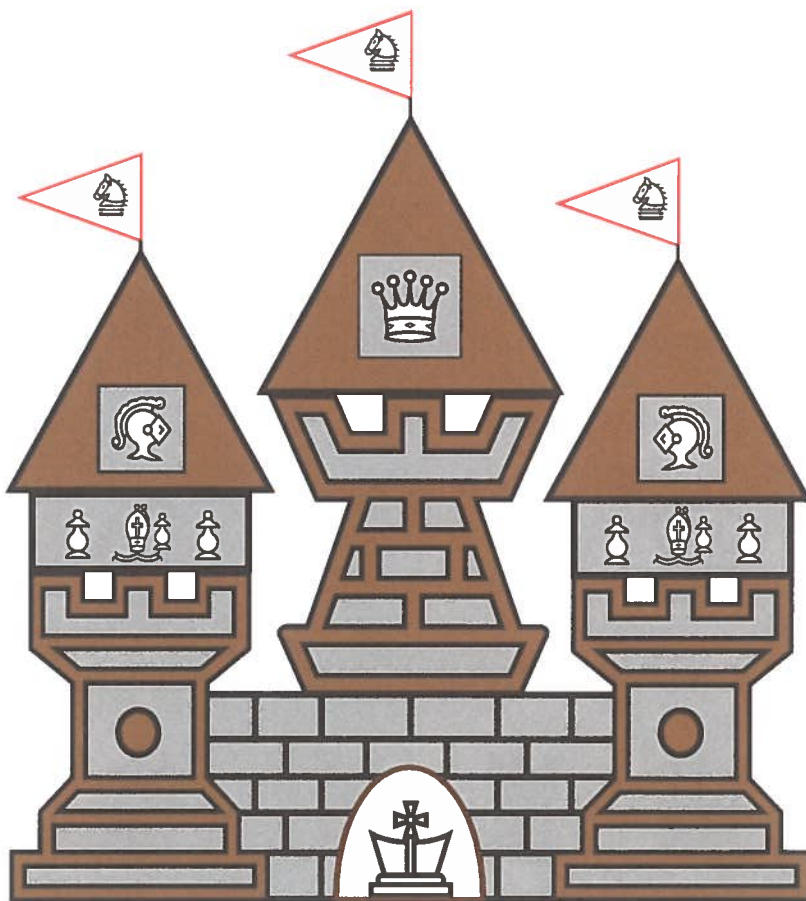
CHAPTER 7

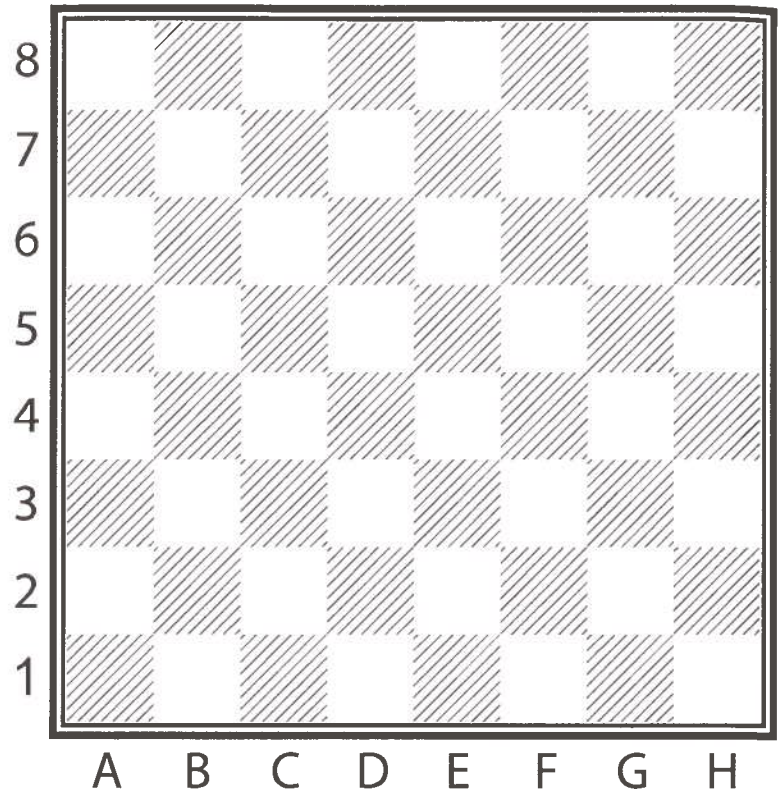
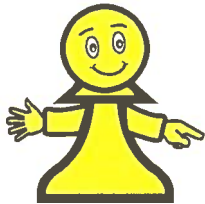
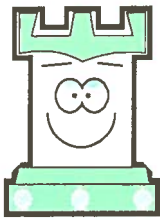
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CERTIFICATE OF EXCELLENCE

GLOSSARY





Did you know that the game of chess was created in India almost 1500 years ago?

During that time the game was called “Chaturanga,” which means “four divisions” (of the military) infantry, cavalry, elephantry, and chariotry, represented by the pieces that would evolve into the modern pawn, knight, bishop, and rook, respectively.

Nowadays, more than 600 million people play chess, making it the world’s most popular board game.



King



Queen



Rook



Bishop



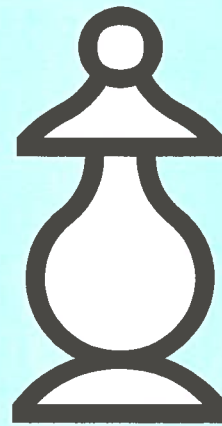
Knight



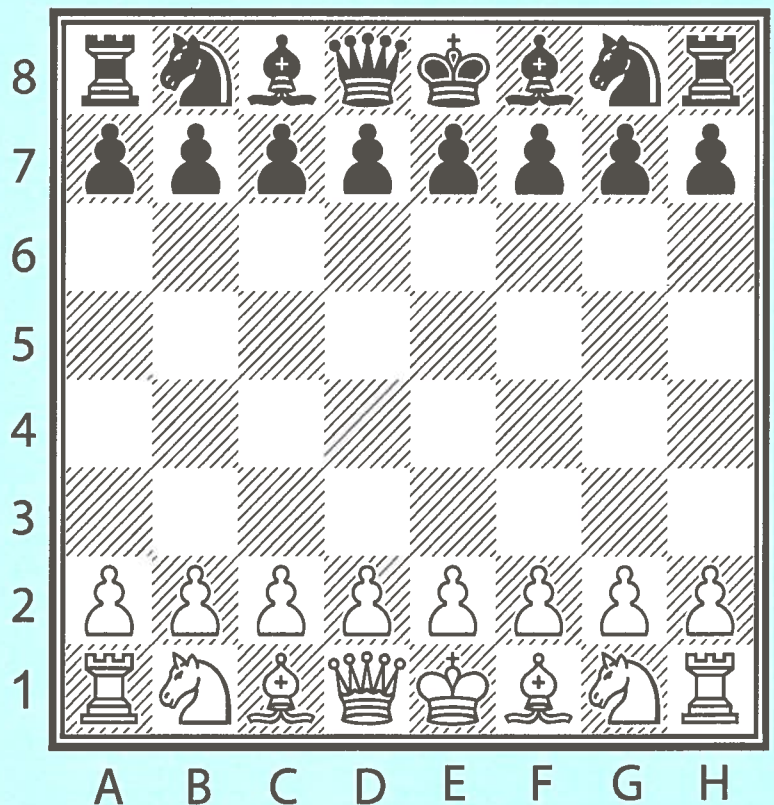
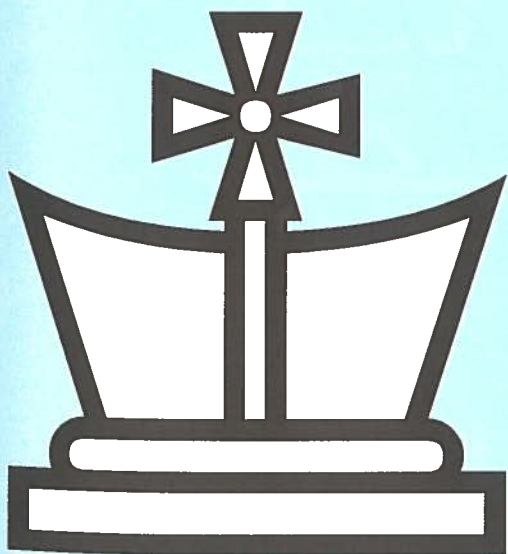
Pawn





















CHAPTER













The CHESS PIECES AND BOARD



Mathematical Chess Table

Name	Symbol	Number	Other Symbols
King		0	 
Queen		9	 
Rook		5	 
Bishop		3	 
Knight		3	 
Pawn		1	 

Chess Number Line

0	1	2	3	4	5	6	7	8	9
									

Name _____

Lesson 1.1 Counting and Matching



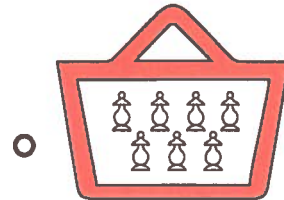
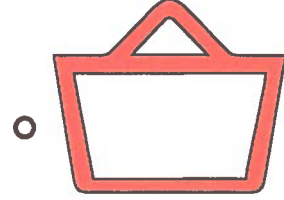
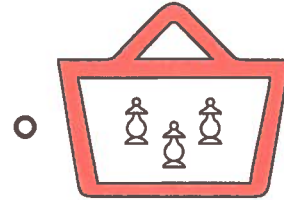
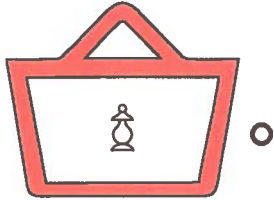
Common Core

K.CC.B.5
MP2, MP3, MP6

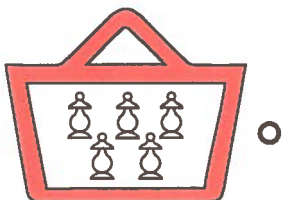
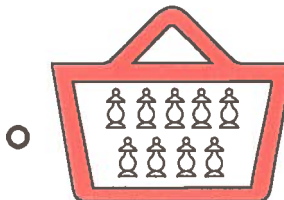
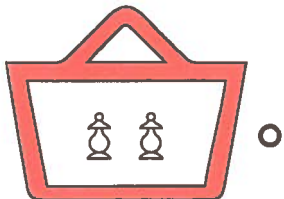
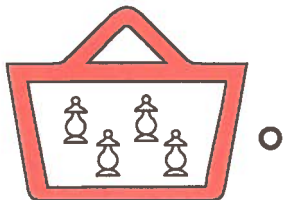


Count the pawns in the basket. Trace a line to match the apples with the number of pawns in the basket.

1



2

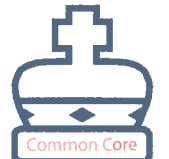


Name _____

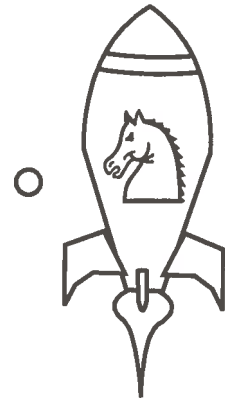
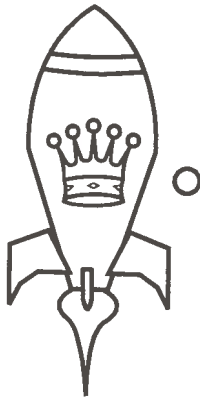
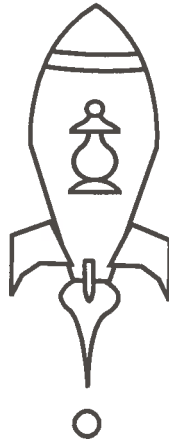
Chess Galaxy



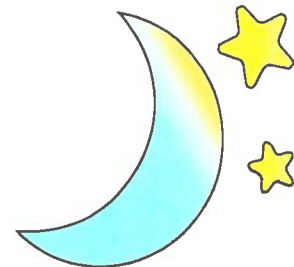
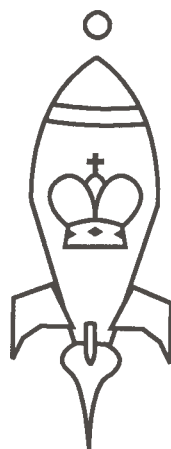
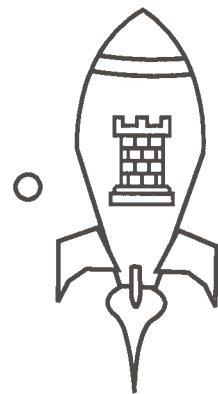
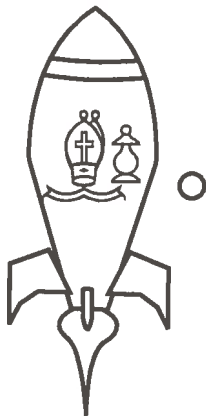
The chess pieces are traveling to space. Trace a line to match the numbers with the chess pieces according to their numerical value. Color the chess pieces according to the color of the matching number.



MP1, MP2, MP3,
MP6, MP7



1 4 9 5 0 3



Name _____

The Chess Mountain



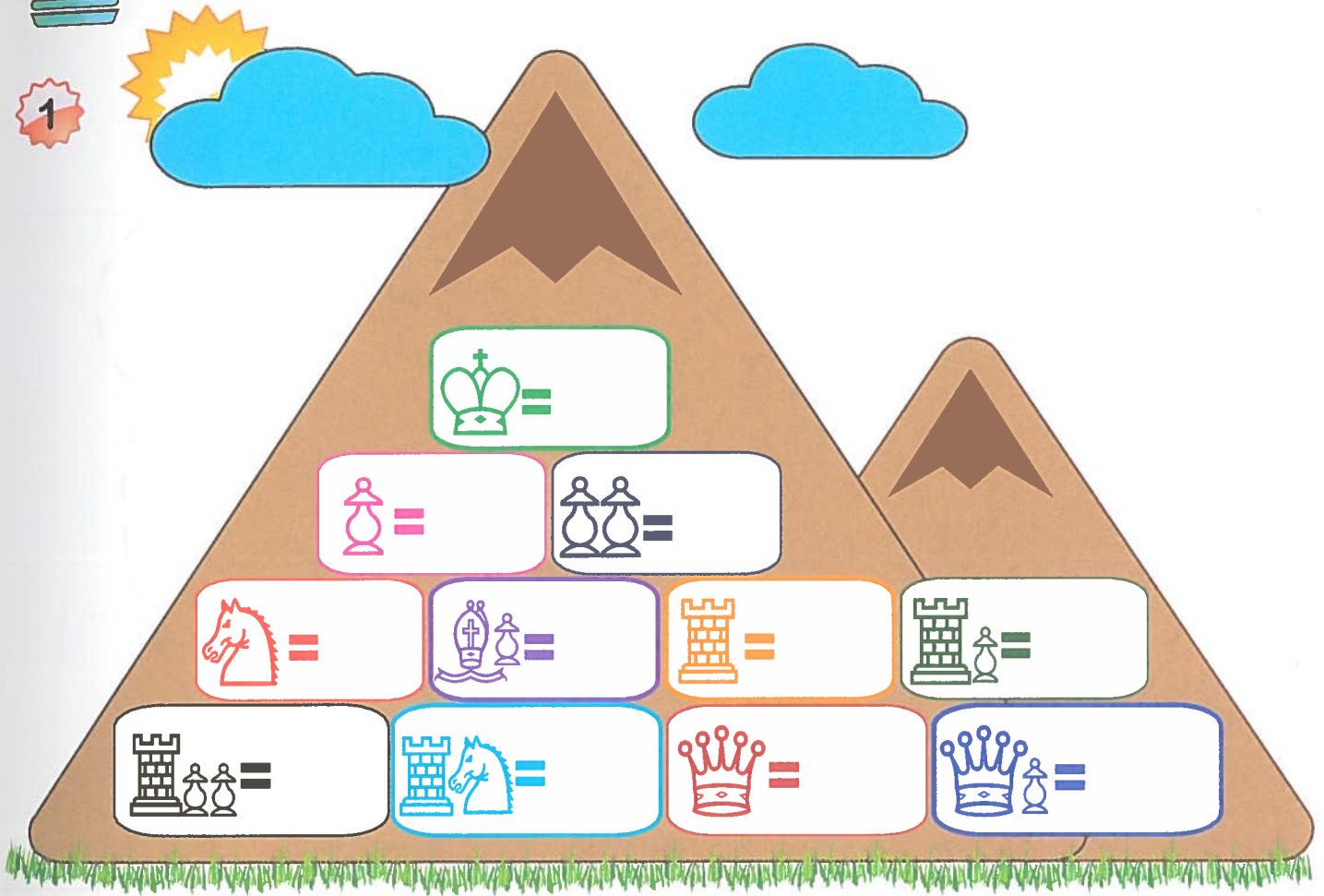
Find the corresponding number for each set of pieces.
Can you recognize the pattern?



Common Core

MP1, MP2, MP3,
MP6, MP7

1



2

• Trace a line to match the pieces with the corresponding backpack.



Name _____

Lesson 1.2 Trace and Color: The King

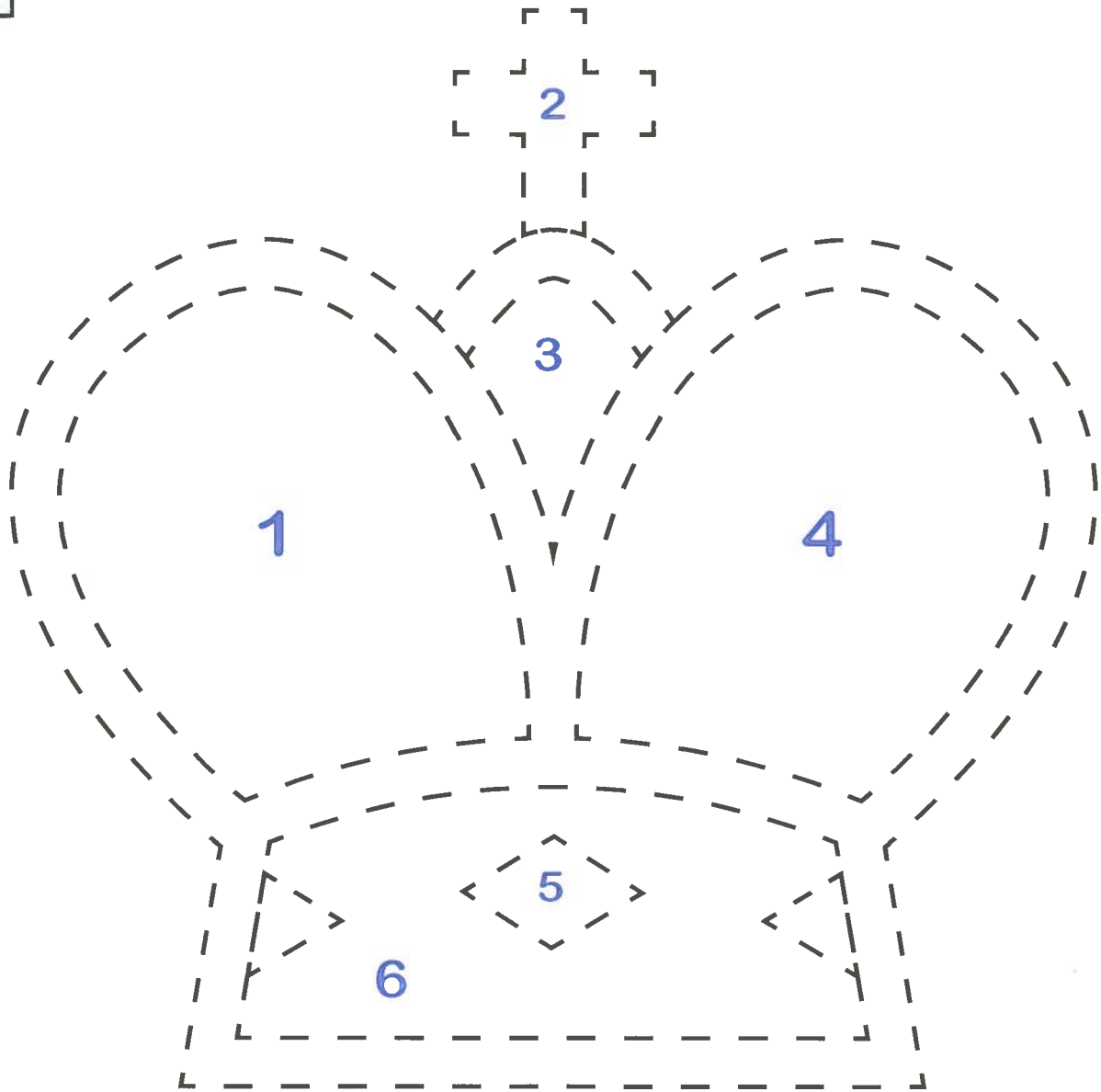








Trace and identify the chess piece. Then, color according to the chart below.



Common Core

MP1, MP2, MP3,
MP6, MP7



 : Red	 : Pink
 : Green	 : Yellow
 : Orange	 : Blue

Name _____

Trace and Color: The Queen

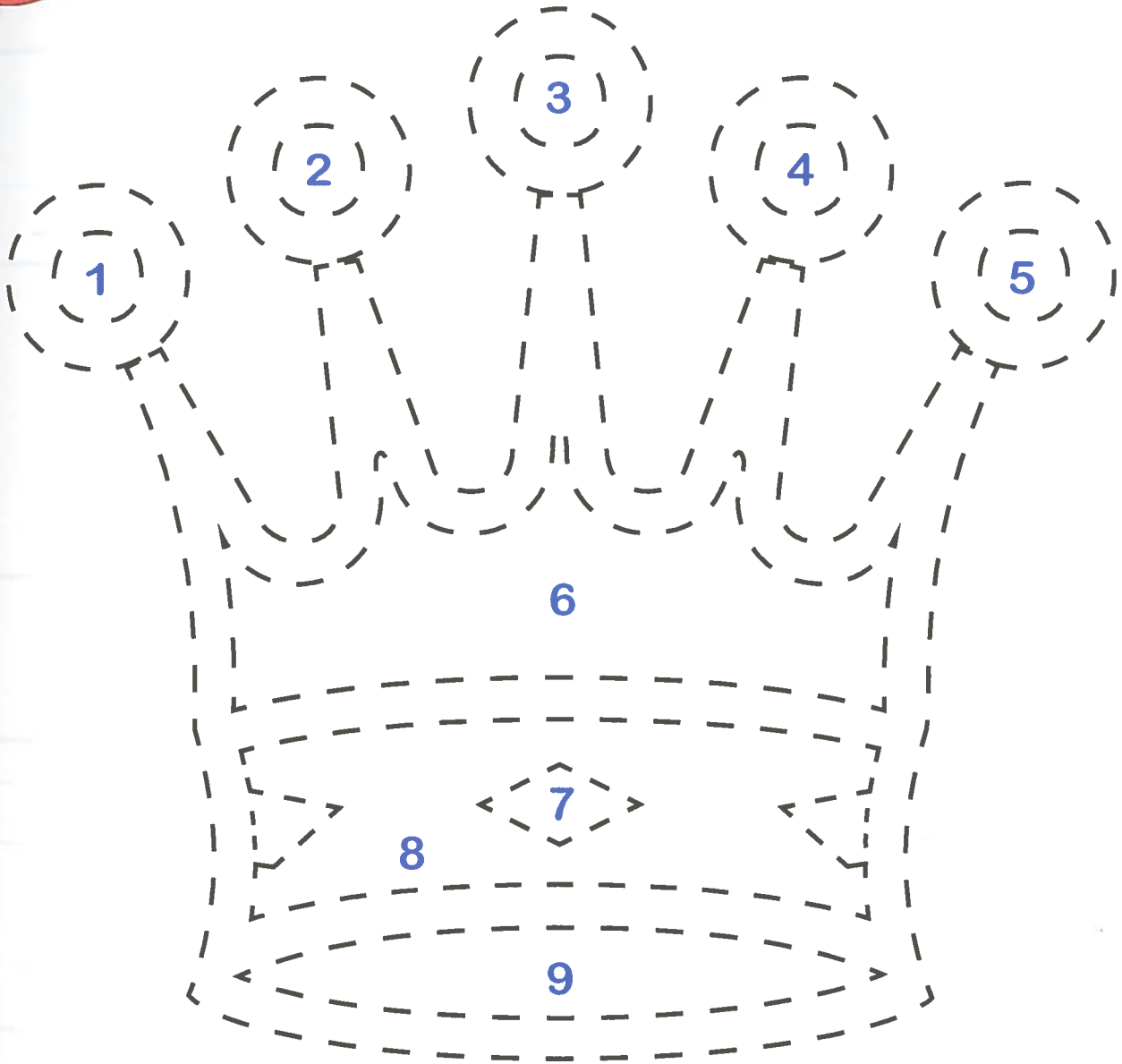











Common Core

MP1, MP2, MP3,
MP6, MP7



Trace and identify the chess piece. Then, color according to the chart below.



 : Red	 : Brown	 : Yellow
 : Pink	 : Orange	 : Purple
 : Blue	 : Green	 : Pink

Name _____

Patterns



Circle the one that continues the pattern.



Common Core

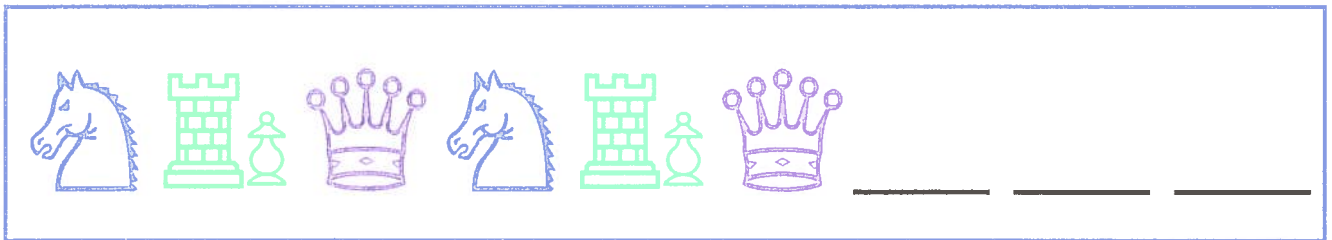
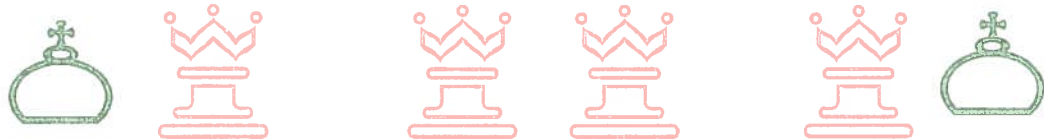
MP1, MP2, MP3,
MP6, MP7



A

B

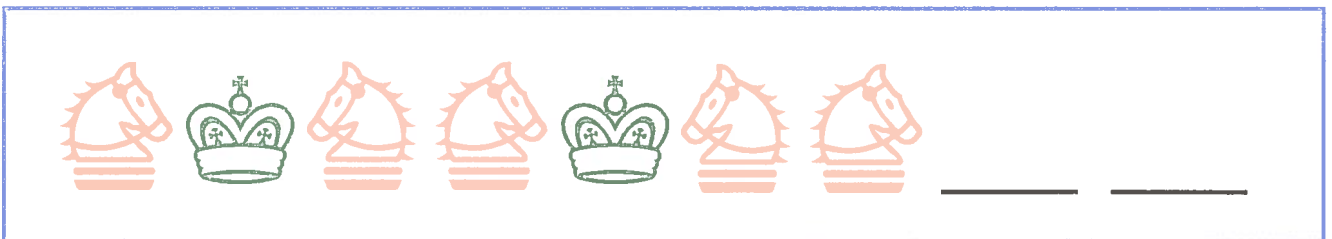
C



A

B

C



A

B

C



Name _____

Trace and Color: The Rook

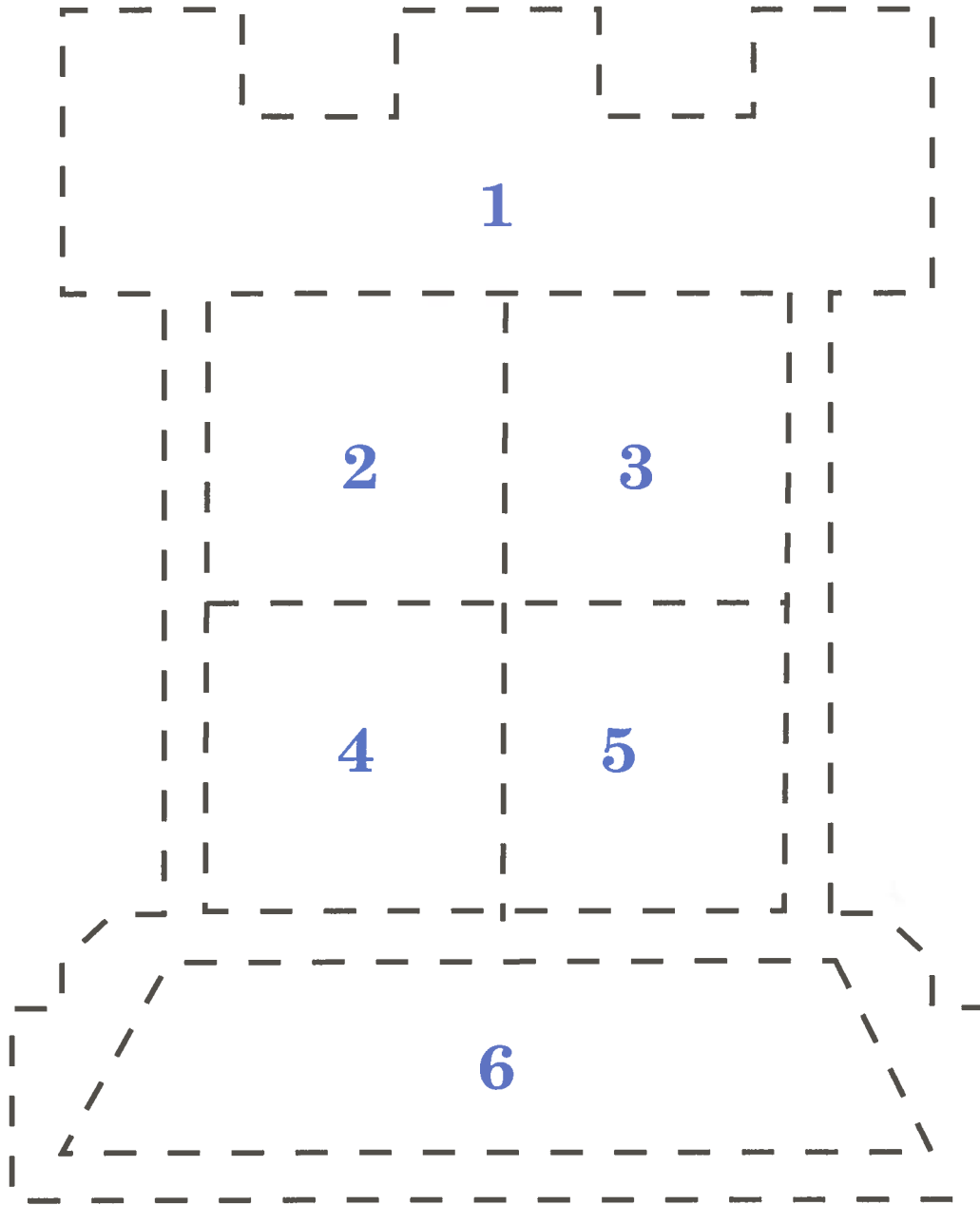







Trace and identify the chess piece. Then, color according to the chart below.



Common Core

MP1, MP2, MP3,
MP6, MP7



 : Blue	 : Green
 : Red	 : Orange
 : Yellow	 : Pink

Name _____

Lesson 1.3 Trace and Color: The Bishop

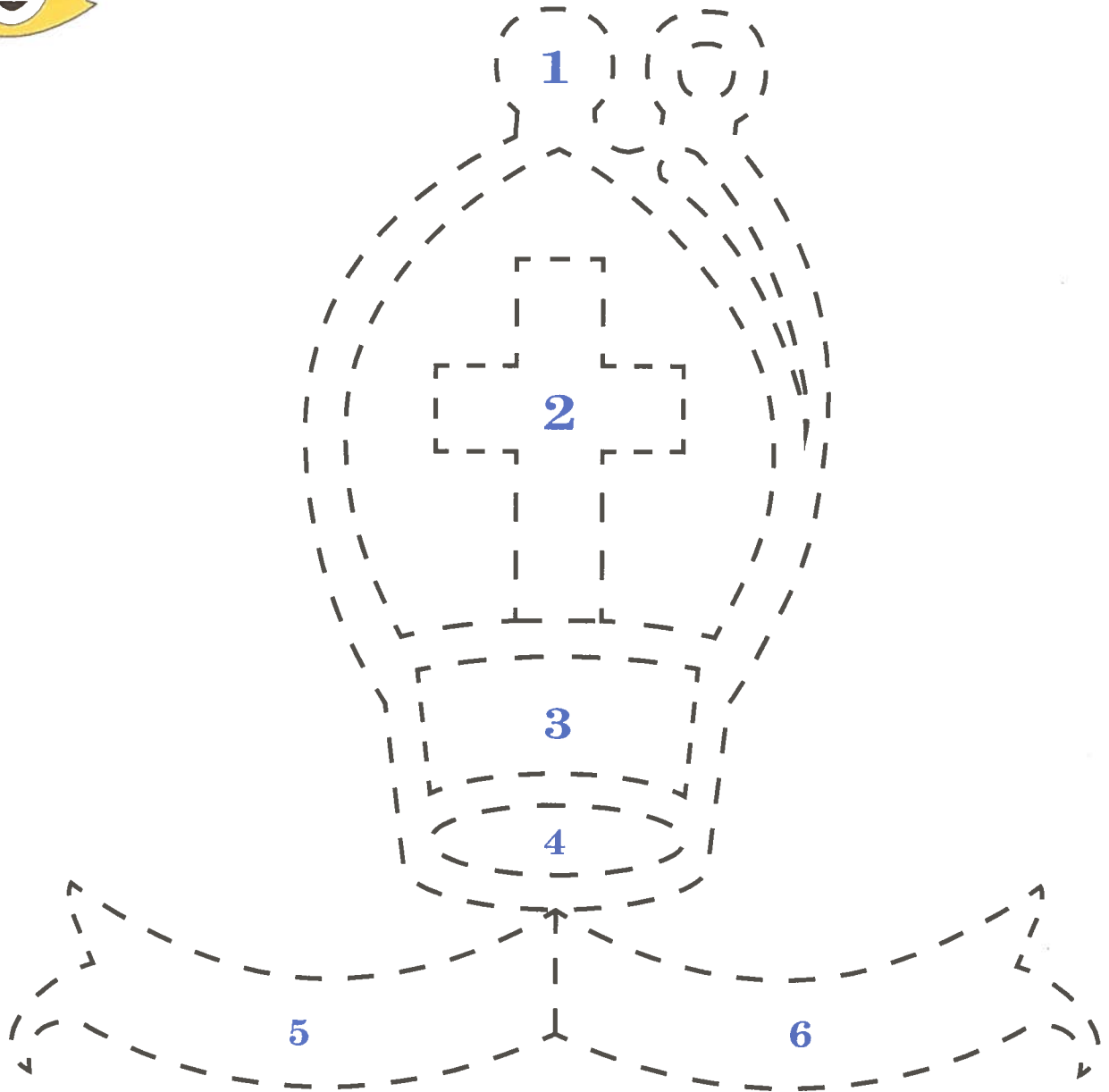








Trace and identify the chess piece. Then, color according to the chart below.



Common Core

MP1, MP2, MP3,
MP6, MP7



 : Red	 : Pink
 : Orange	 : Yellow
 : Blue	 : Green

Name _____

Patterns

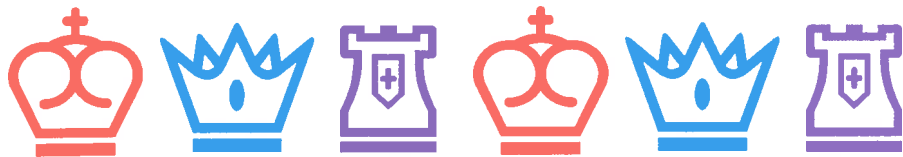


Look at the pattern below, and write the letters that describe the pattern. The first example is done for you.



Common Core

MP1, MP2, MP3,
MP6, MP7

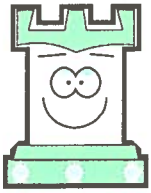


ABC



Name _____

Trace and Color: The Knight

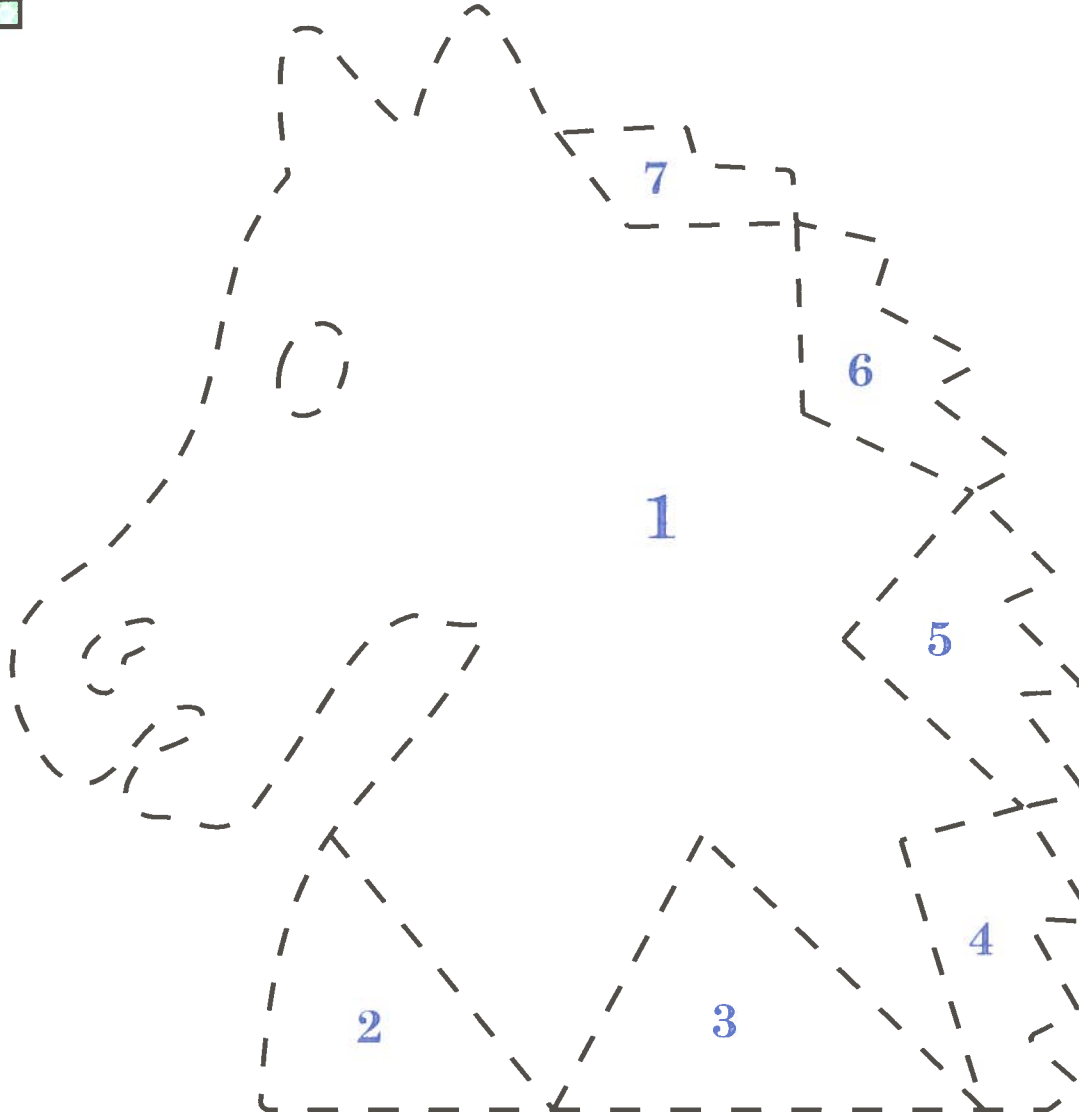









Trace and identify the chess piece. Then, color according to the chart below.



Common Core

MP1, MP2, MP3,
MP6, MP7



 : Purple	 : Pink	
 : Brown	 : Yellow	
 : Green	 : Blue	 : Red

Name _____

Trace and Color: The Pawn

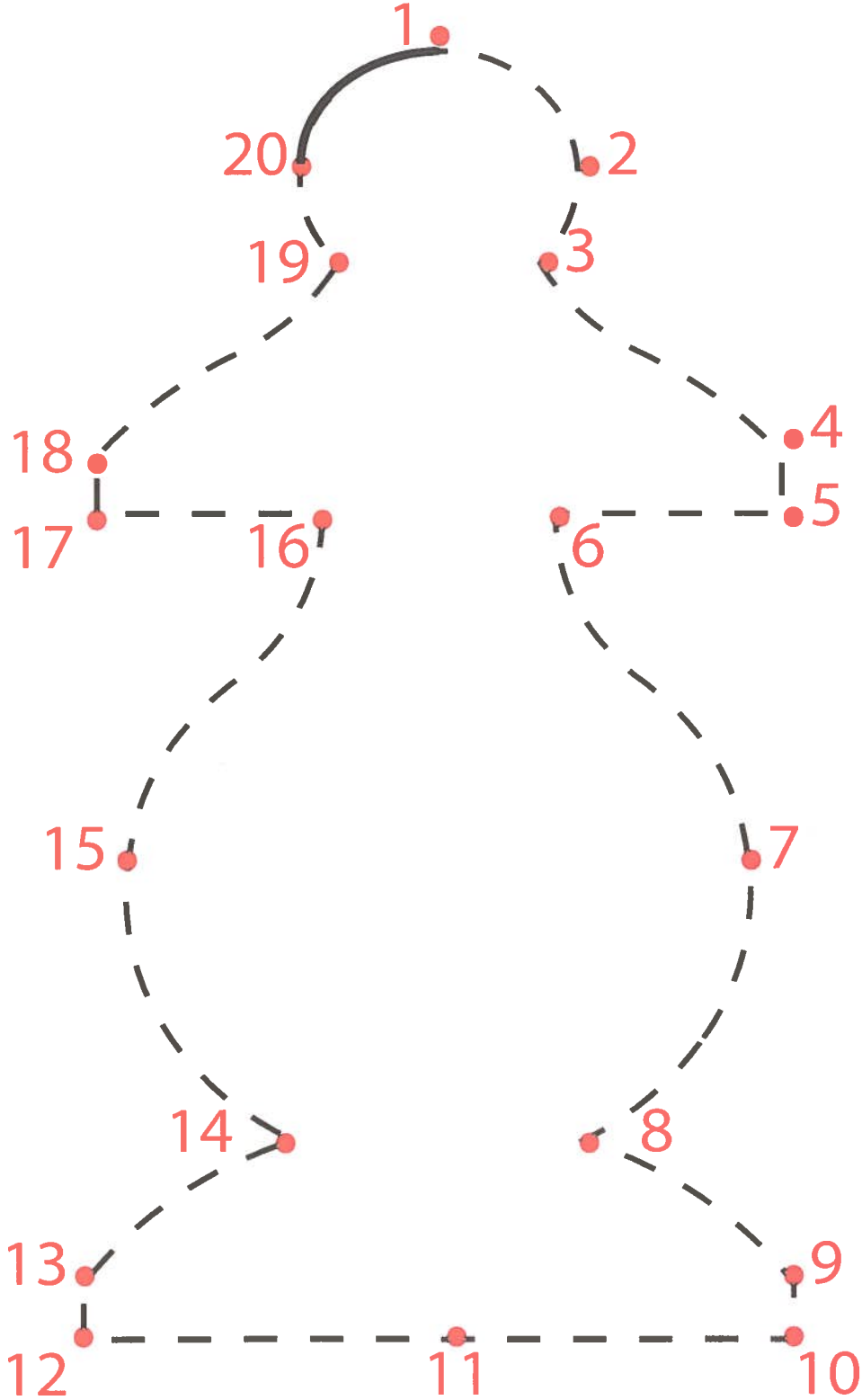


Connect the red dots in numerical order. Identify the chess piece and color.



Common Core

MP1, MP2, MP3,
MP6, MP7



Name _____

Lesson 1.4 Patterns

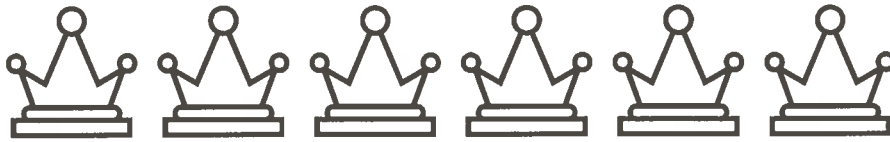


Color the chess pieces according to the written pattern for each row.

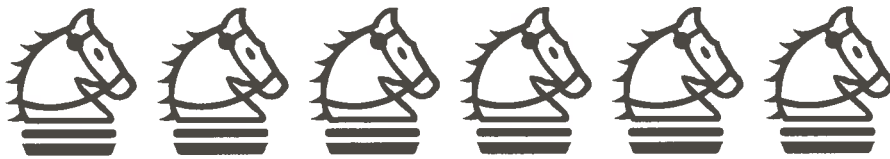


Common Core

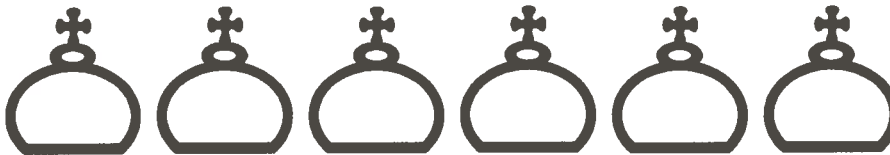
MP1, MP2, MP3,
MP6, MP7



ABC



AAB



ABB



AB



AABB



ABBB

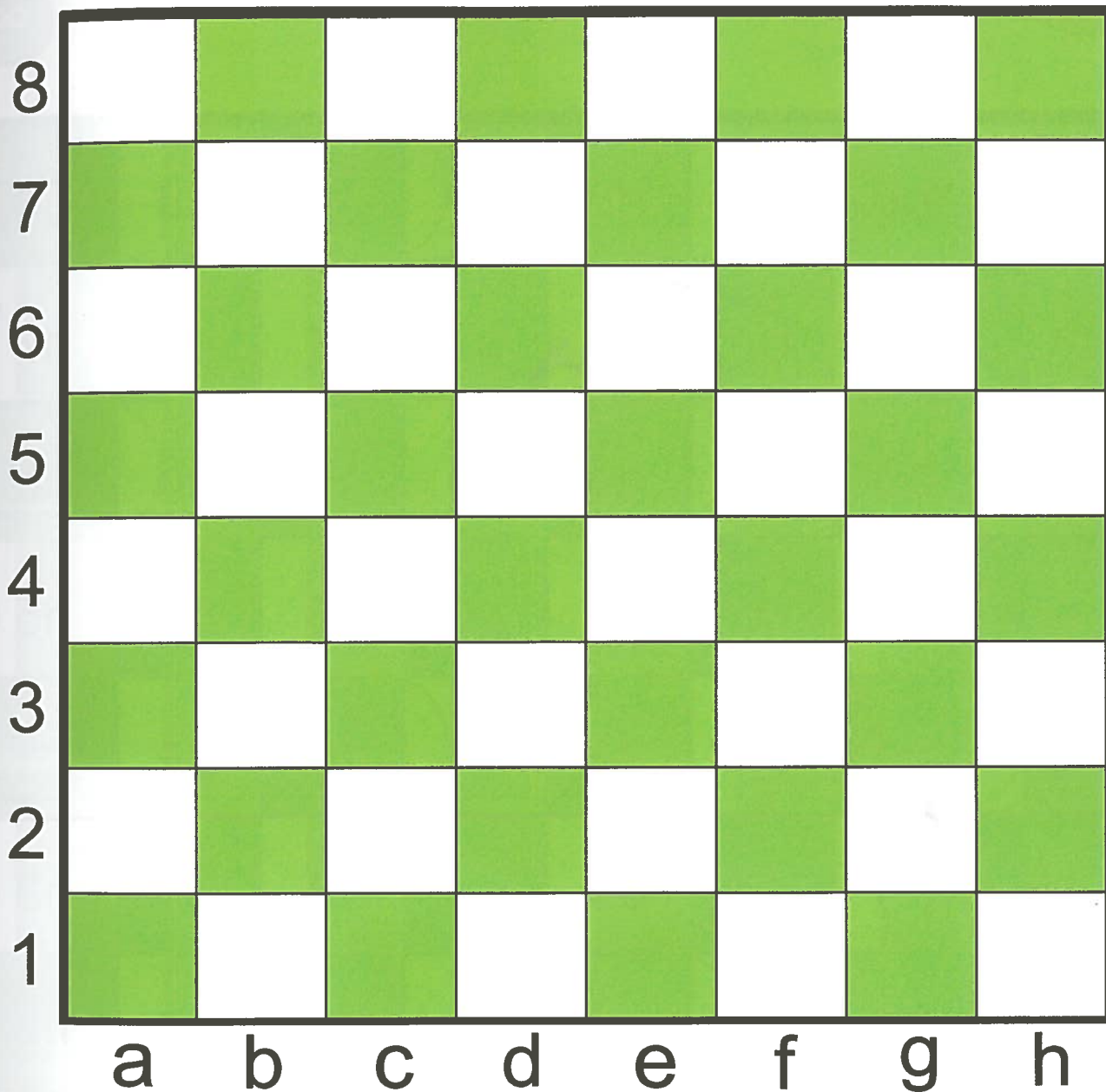
Name _____

Common Core

K.CC.A.1, K.G.A.2, K.CC.B.4,
MP1, MP2, MP3, MP6, MP7, MP8

The Chessboard

Michael got a new chessboard for his birthday, but he doesn't know how many squares are on the chessboard. Can you help him find out? How many squares does the chessboard have? How many squares are light, and how many are green?



  Total number of squares: _____

 Light squares: _____

 Green squares: _____

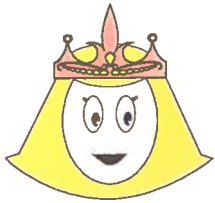
Name _____

Lesson 1.5 The Algebraic Notation



Common Core

K.G.B.6, 5.G.A.1,
MP1, MP3, MP4,
MP5, MP6, MP7, MP8



Look at the chessboard below, and practice the names of the squares.

8	a8	b8	c8	d8	e8	f8	g8	h8
7	a7	b7	c7	d7	e7	f7	g7	h7
6	a6	b6	c6	d6	e6	f6	g6	h6
5	a5	b5	c5	d5	e5	f5	g5	h5
4	a4	b4	c4	d4	e4	f4	g4	h4
3	a3	b3	c3	d3	e3	f3	g3	h3
2	a2	b2	c2	d2	e2	f2	g2	h2
1	a1	b1	c1	d1	e1	f1	g1	h1
	a	b	c	d	e	f	g	h

Name _____

Naming Squares I



Identify and name the squares represented by the circles. Connect the circles with a straight line in columns, rows, and diagonals. What type of shapes can you see?

8		■	○	■		■		■
7	■		■		■		■	
6	○	■		■	○	■		■
5	■		■		■		■	
4		■	○	■		■	○	■
3	■		■		■		■	
2		■		■	○	■		■
1	■		■		■		■	
	a	b	c	d	e	f	g	h

Name _____

Naming Squares II



Identify and name the squares represented by the circles.
Connect the squares that the teacher reads and find the shapes.

8								
7								
6								
5								
4								
3								
2								
1								
	a	b	c	d	e	f	g	h

Name _____

Naming Squares III



Identify and name the squares represented by the circles.
Connect the squares that the teacher reads and find the shapes.

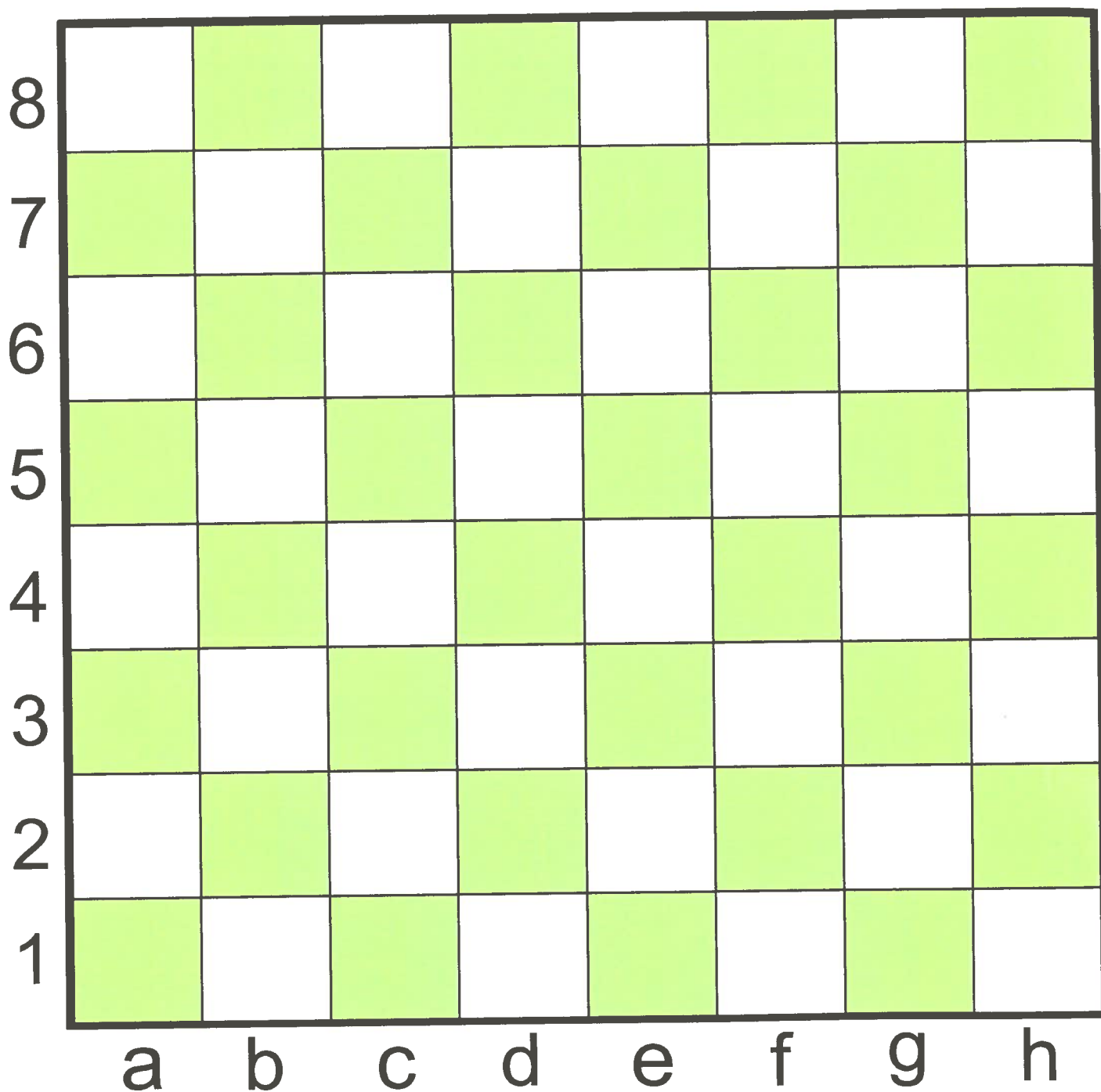
8		■		■	○	■		■
7	■		■		■		■	
6		■		■		■		■
5	■	○	■		○		■	○
4		■		■		■		■
3	■		■		■		■	
2		○		■	○	■		○
1	■		■		■		■	
	a	b	c	d	e	f	g	h

Name _____

Naming Squares IV



On the chessboard find the following squares and write the names: b4, c5, b6, e7, g5, e3. Connect with straight line: b4-b6-c5-e3-g5-e7-b4. How many shapes do you see? Do you see something else?

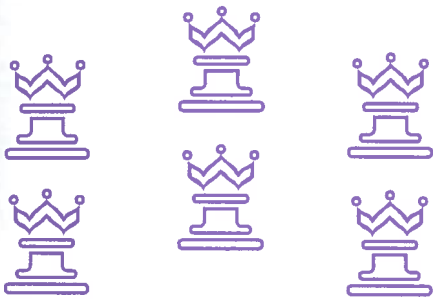
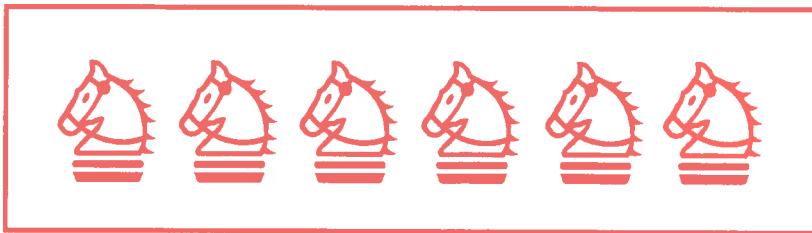


Name _____

Count and Compare



Count the set of knights in the box below. Then, decide if each group of pieces contains **GREATER THAN**, **LESS THAN** or **EQUAL TO** the number of red knights in the box. Circle your answer.



greater than

equal than

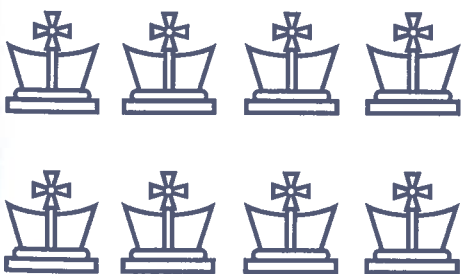
less than



greater than

equal than

less than



greater than

equal than

less than



greater than

equal than

less than









Name _____

Lesson 2.7 Compare Numbers Up to 10



Write the numbers that represent the chess pieces below.
Then compare, and write in the box $<$, $>$, $=$.

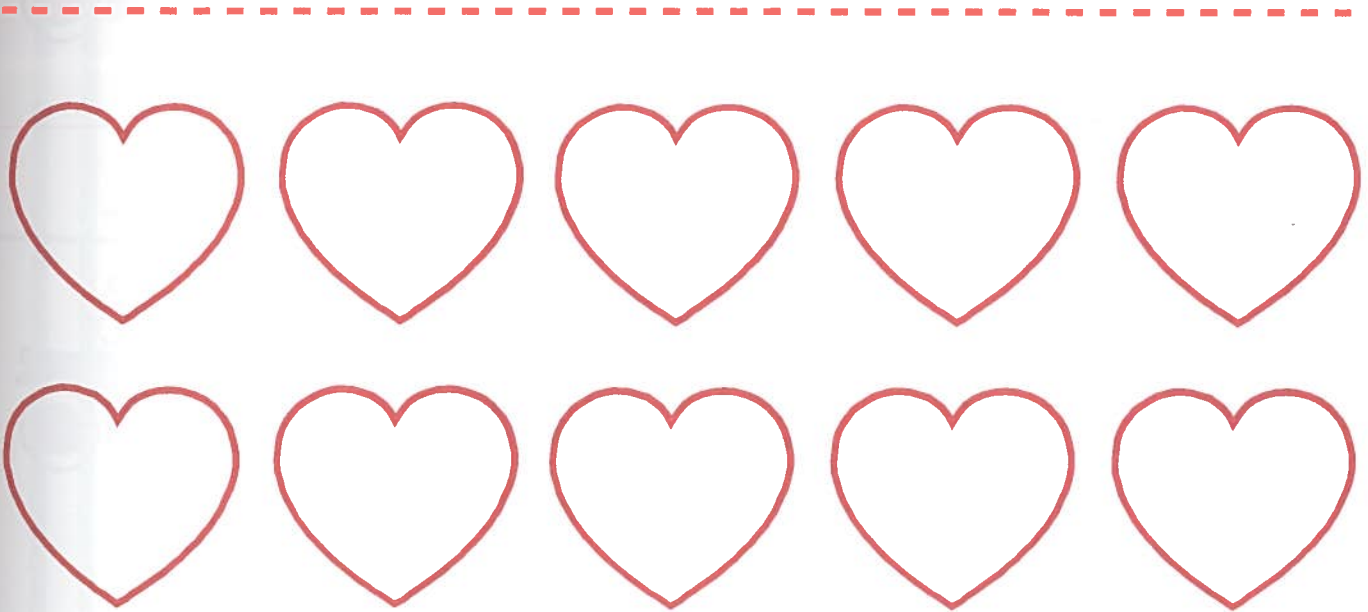
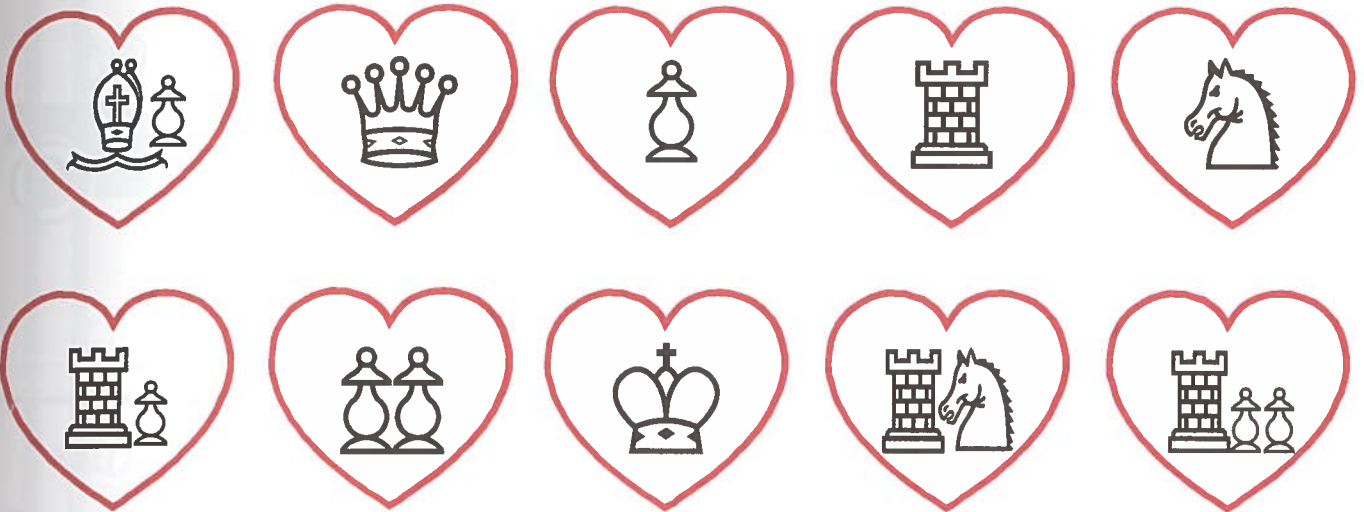
 _____, _____ <input type="text"/>	 _____, _____ <input type="text"/>
 _____, _____ <input type="text"/>	 _____, _____ <input type="text"/>
 _____, _____ <input type="text"/>	 _____, _____ <input type="text"/>

Name _____

Number Order



Look at the hearts below, and write the numbers in order from least to greatest in the hearts at the bottom. Do you see any patterns here?



Name _____

Chess Motorcycles



The chess pieces are driving motorcycles.
Write the number that represents the chess pieces below each one.
Then compare them, and write in the box $<$, $>$, $=$.

 ____ <input type="text"/> ____	 ____ <input type="text"/> ____
 ____ <input type="text"/> ____	 ____ <input type="text"/> ____
 ____ <input type="text"/> ____	 ____ <input type="text"/> ____



level  COMPLETED!

I know the name of the numbers and count sequence.

I can count to tell the number of objects.

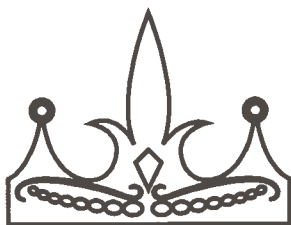
I can compare numbers using chess pieces.

I can recall the number value of the chess pieces.

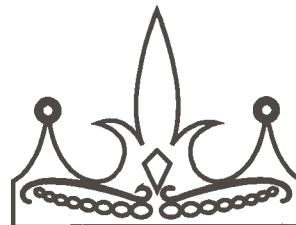
I can use the chess number line to count numbers in order.

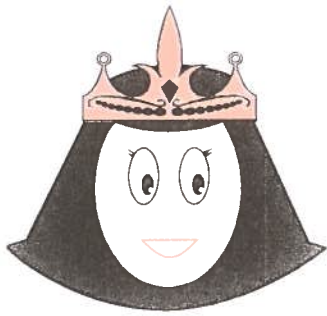
I can use the chess dominoes to recall numbers.

I know how to move the chess king.



CHESS & MATH

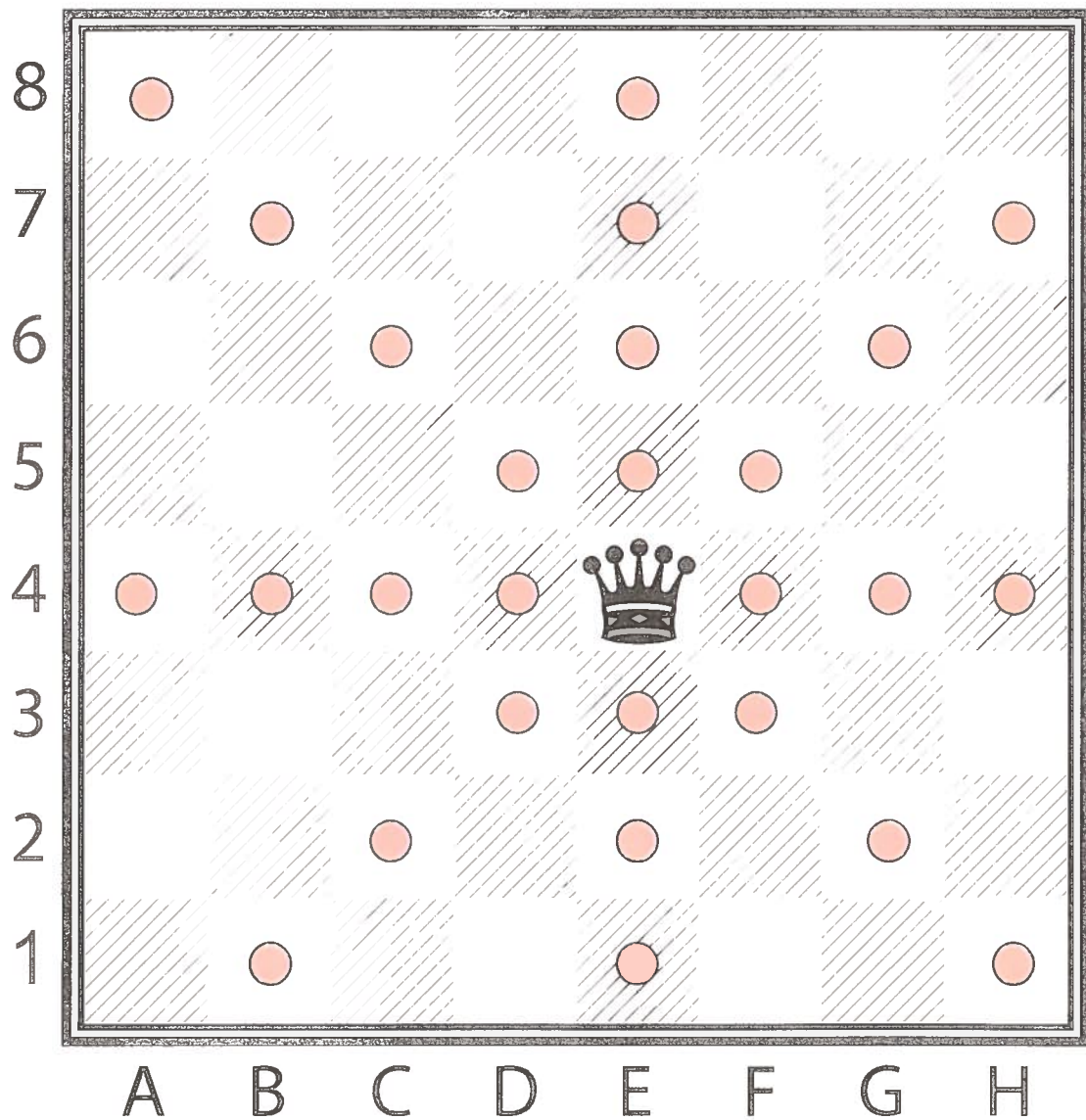




THE QUEEN

Hello friends!

I am the queen, and I am the most powerful piece in our game because I can move in any one straight direction — forward, backward, sideways, or diagonally. My numerical value is 9.











CHAPTER



OPERATIONS & ALGEBRAIC THINKING



	+		=	?
	-		=	?
				
+			-	
<hr/>			<hr/>	
	?			?

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Name _____

Lesson 3.1 Pair of Numbers: 3

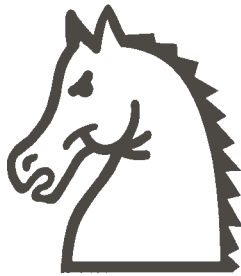
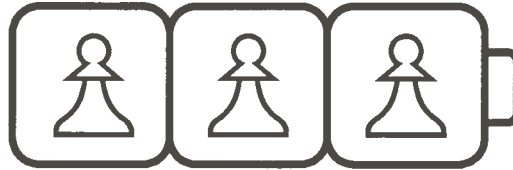


Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



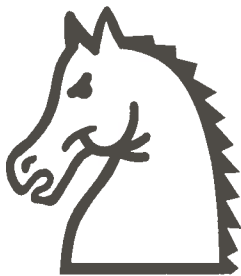
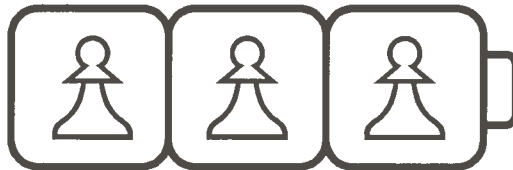
Common Core

K.OA.A.1,
K.OA.A.2, K.OA.A.3,
K.OA.A.4, K.OA.A.5
MP1, MP2, MP3, MP4,
MP5, MP6, MP7, MP8.



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.....



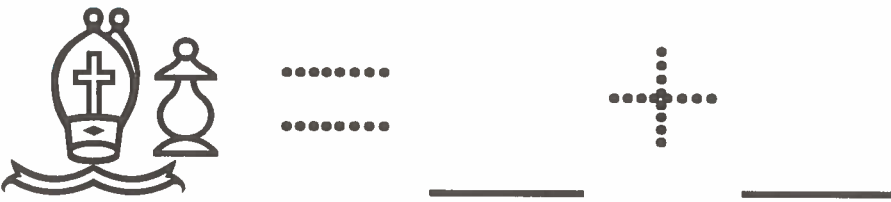
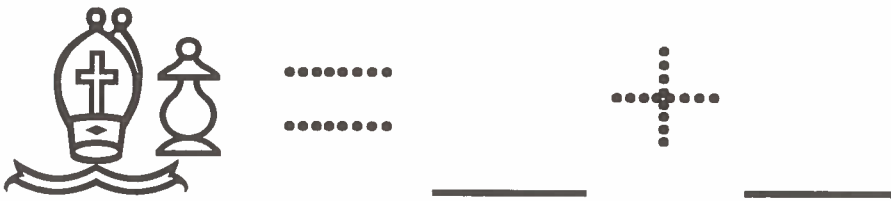
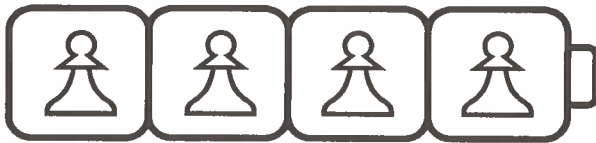
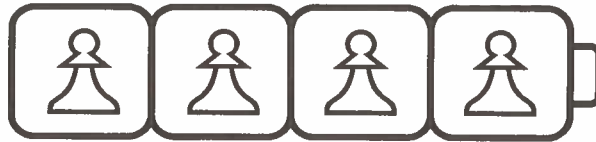
Name _____

Pair of Numbers: 4



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.

.A.3,
.A.5
MP4,
MP8.



Name _____

Pair of Numbers: 5



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



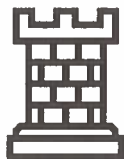
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.....





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.....





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Name _____

Lesson 3.2 Pair of Numbers: 6



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.

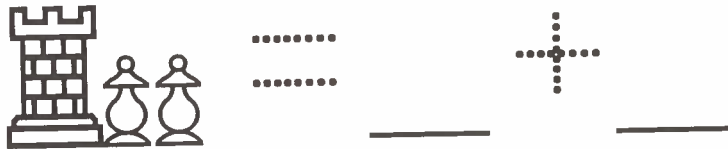
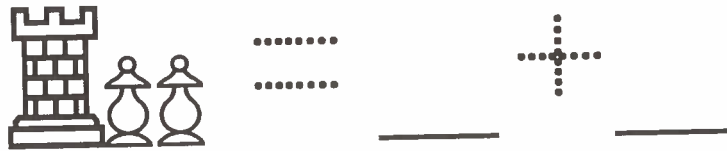


Name _____

Pair of Numbers: 7



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



Name _____

Pair of Numbers: 8

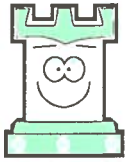


Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



Name _____

Pair of Numbers: 9



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



.....
.....





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.....





.....
.....





.....
.....



Name _____

Lesson 3.3 Pair of Numbers: 10



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.

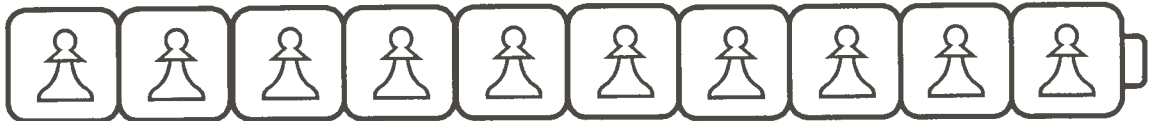
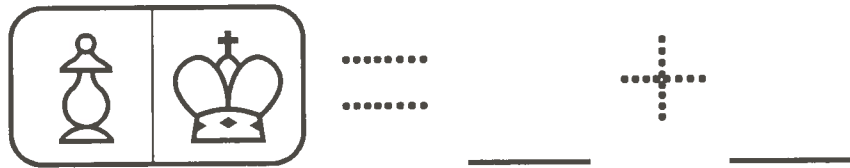


Name _____

Pair of Numbers: 10



Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



Name _____

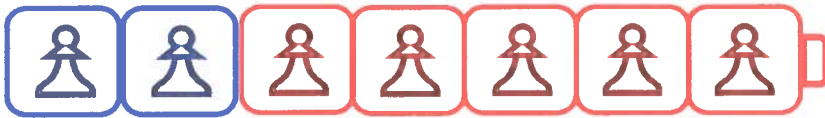
Lesson 3.4 Practice with Pair of Numbers



Write the number sentence that is related to the chess cubes.



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____

Name _____

Practice with Pair of Numbers I

Write the number sentence that is related to the chess cubes.









Name _____

Practice with Pair of Numbers II

Write the number sentence that is related to the chess cubes.



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____

Name _____

Practice with Pair of Numbers III

Write the number sentence that is related to the chess cubes.



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____

Name _____

Practice with Pair of Numbers IV

Write the number sentence that is related to the chess cubes.



_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____

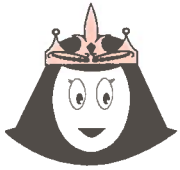


_____ + _____ = _____

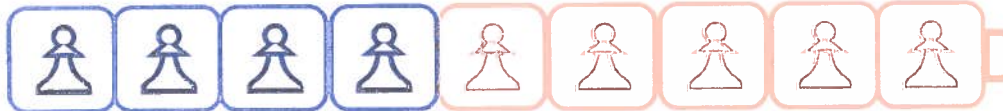
Name _____

Practice with Pair of Numbers V

Write the number sentence that is related to the chess cubes.







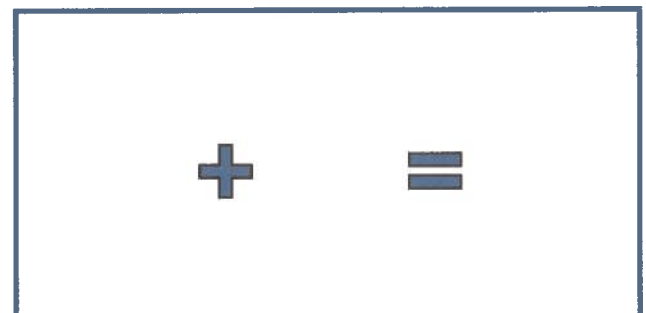
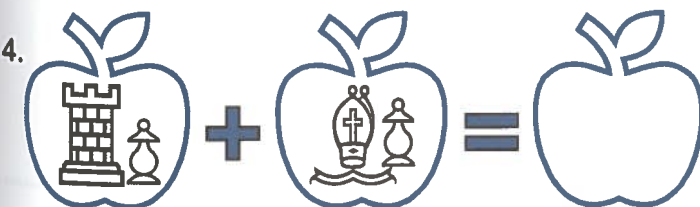
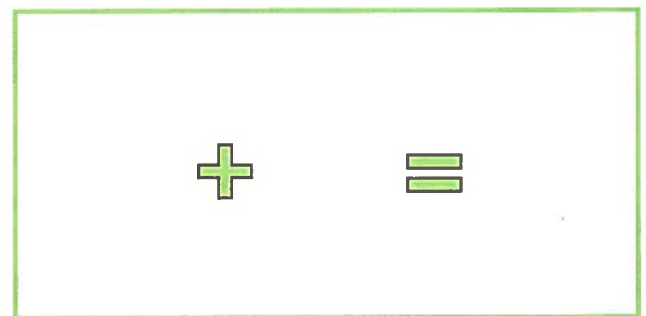
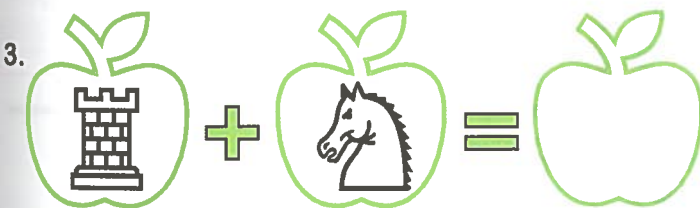
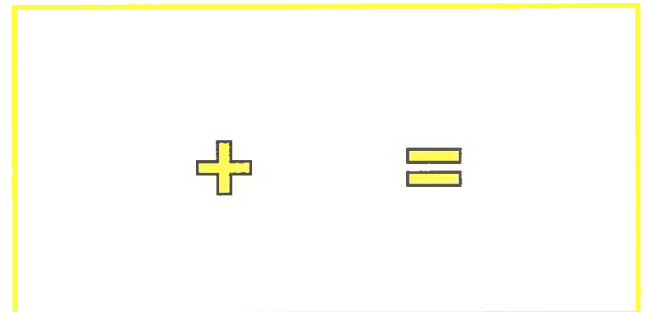
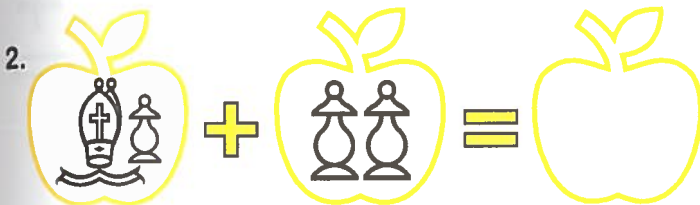
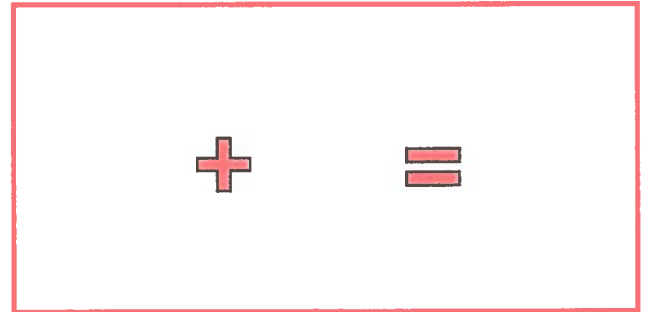
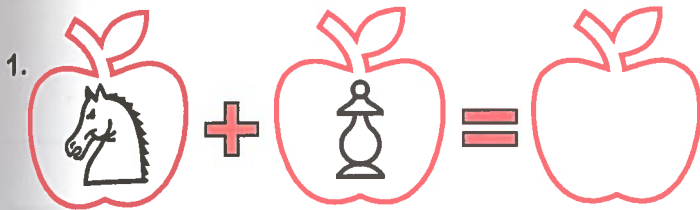


Name _____

Lesson 3.5 Apple Addition



Using the chess number line, add the apples and draw circles to represent the addition in the boxes at the right. Write the number sentence below each exercise.



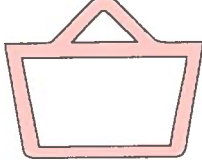





Name _____



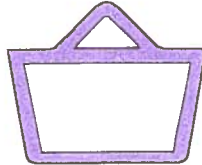
Addition Practice

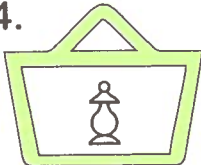

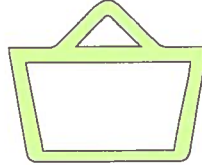



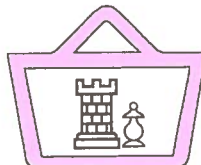
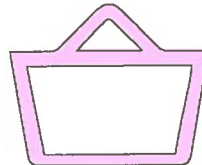
Using the chess number line add the pieces inside the baskets and write the number sentences on the right.



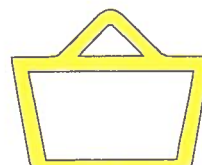
1.  +  =  _____ + _____ = _____

2.  +  =  _____ + _____ = _____

3.  +  =  _____ + _____ = _____

4.  +  =  _____ + _____ = _____

5.  +  =  _____ + _____ = _____

6.  +  =  _____ + _____ = _____

Name _____

Heart Addition Practice

Using the chess number line add the pieces inside the hearts and write the number sentences on the right.



1.

+	+
_____	_____

2.

+	+
_____	_____

3.

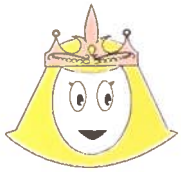
+	+
_____	_____

4.

+	+
_____	_____

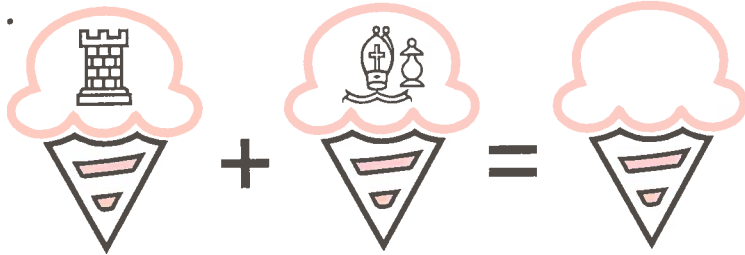
Name _____

Ice Cream Addition Practice



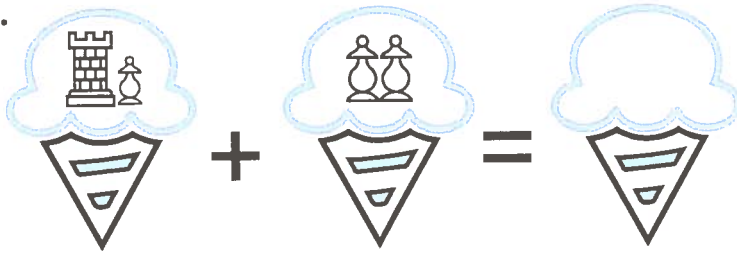
Using the chess number line add the ice cream and write the number sentences on the right.

1.



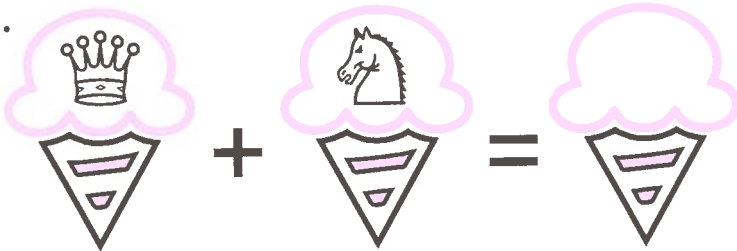
_____ + _____ = _____

2.



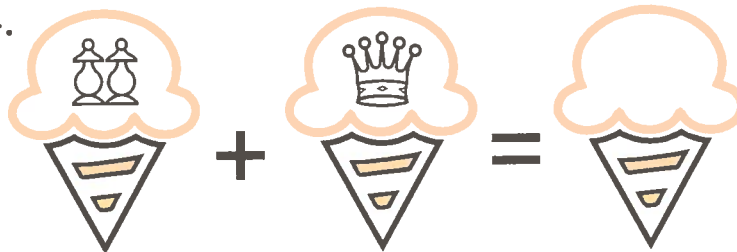
_____ + _____ = _____

3.



_____ + _____ = _____

4.



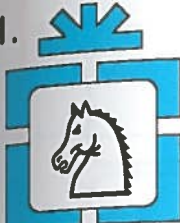
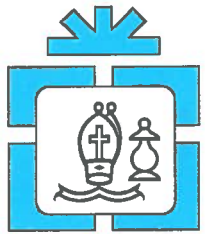
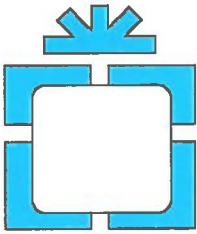
_____ + _____ = _____


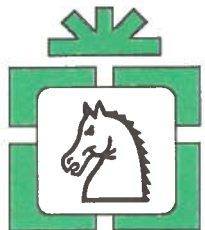
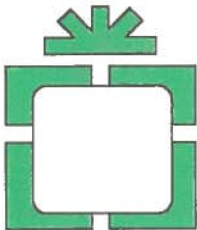
Name _____


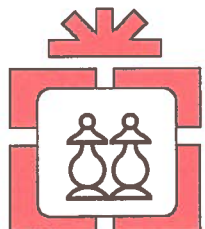
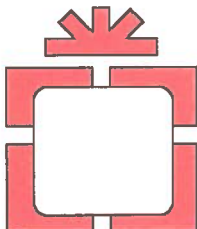
Lesson 3.6 Chess Presents Addition Practice


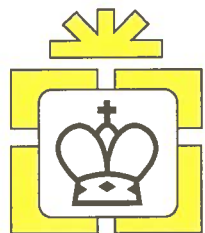
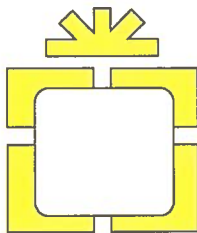
Use addition to find out how many presents we have for the party.
Write the number sentence on the right.


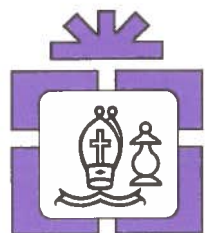
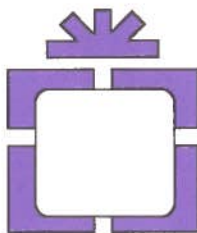


1.  +  =  _____ + _____ = _____

2.  +  =  _____ + _____ = _____

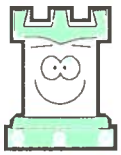
3.  +  =  _____ + _____ = _____

4.  +  =  _____ + _____ = _____

5.  +  =  _____ + _____ = _____

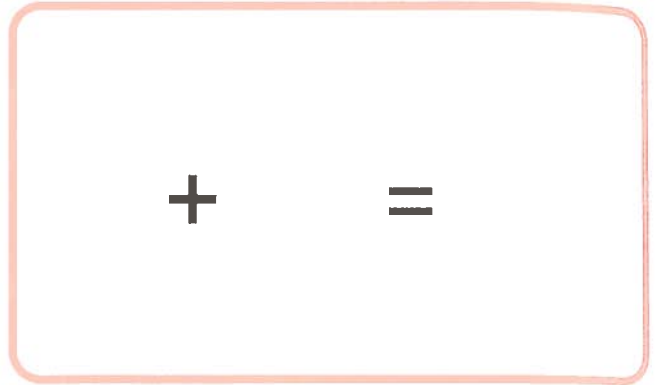
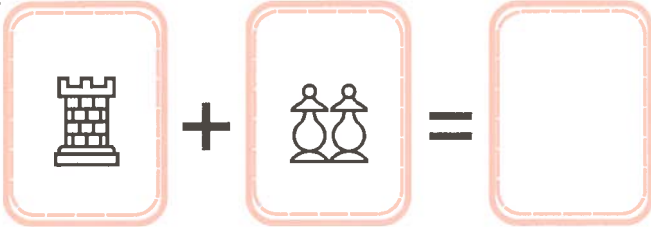
Name _____

Chess Cards Addition Practice

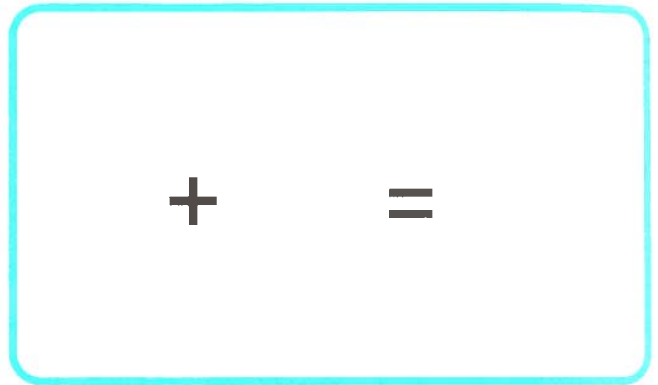
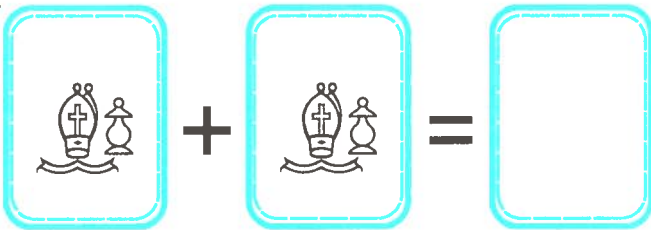


Use the chess number line to add the cards. Draw circles on the right to represent the addition problem. Write the number sentence below each exercise.

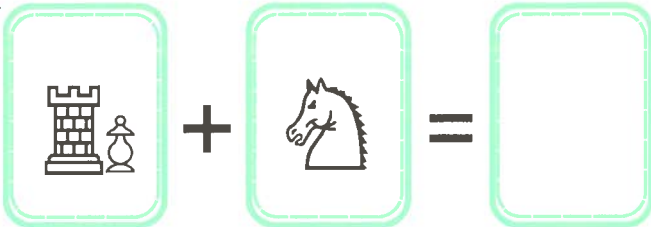
1.



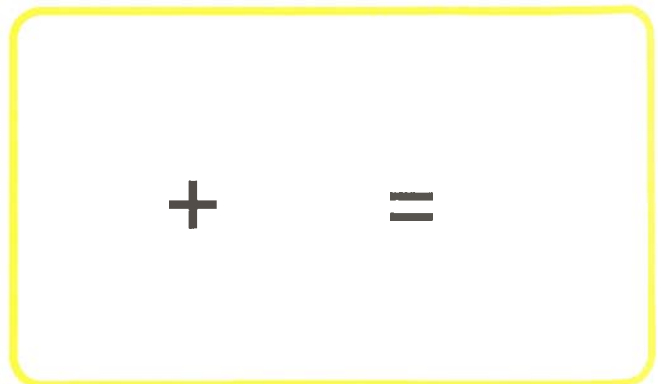
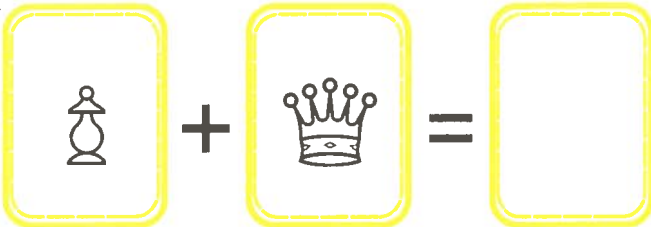
2.



3.



4.



Name _____

Chess Domino Addition Practice



Use addition to solve the chess domino's equations. Fill in the blank with the missing number. Write the number sentence in the blank squares on the right.

1.

+		+	
<hr/>		<hr/>	

2.

+		+	
<hr/>		<hr/>	

3.

+		+	
<hr/>		<hr/>	

4.

+		+	
<hr/>		<hr/>	

5.

+		+	
<hr/>		<hr/>	

6.

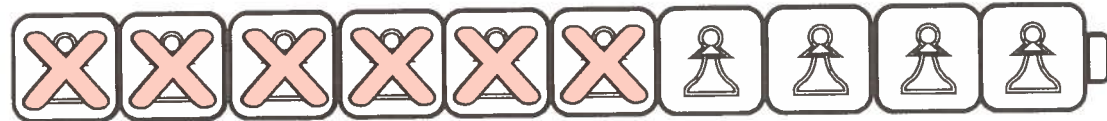
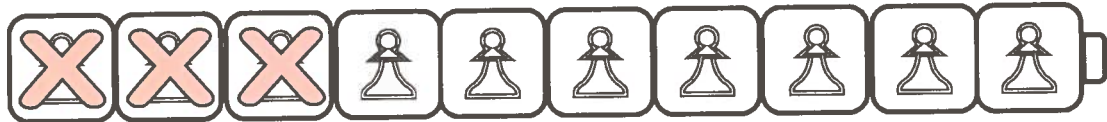
+		+	
<hr/>		<hr/>	

Name _____

Lesson 3.7 Subtracting to 10



Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



Name _____

Subtracting to 10



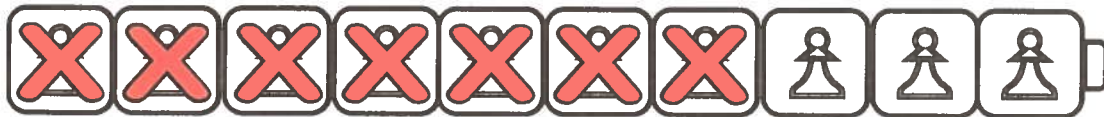
Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



	
		_____	_____



	
		_____	_____



	
		_____	_____



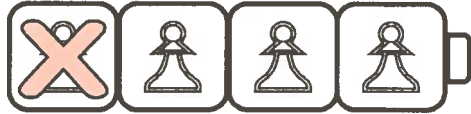
	
		_____	_____

Name _____

Lesson 3.8 Subtraction Practice with Chess Cubes I



Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$

Name _____

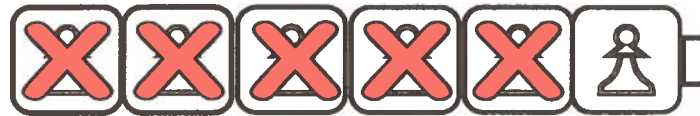
Subtraction Practice with Chess Cubes II



Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



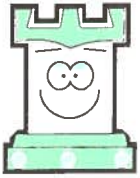
$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$

Name _____

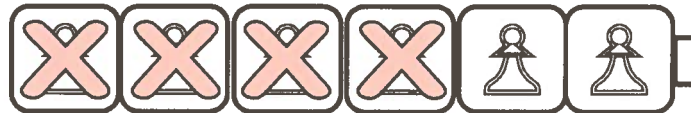
Subtraction Practice with Chess Cubes III



Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$

Name _____

Subtraction Practice with Chess Cubes IV



Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$



$$\begin{array}{r} \text{.....} \\ \text{-----} \end{array} \quad \begin{array}{r} \text{.....} \\ \text{.....} \\ \text{-----} \end{array}$$

Name _____

Lesson 3.9 Chess Pieces Subtraction Practice I



Complete the number sentence in each case. Cross out the cubes that are needed to subtract.



_____ 



_____ 



_____ 



_____ 

Name _____

Chess Pieces Subtraction Practice II



Complete the number sentence in each case. Cross out the cubes that are needed to subtract.



Name _____

Chess Pieces Subtraction Practice III



Complete the number sentence in each case. Cross out the cubes that are needed to subtract.



..... 

.....



..... 

.....



..... 

.....



..... 

.....

Name _____

Chess Pieces Subtraction Practice IV


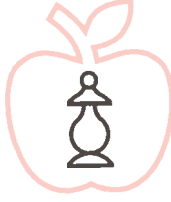

Complete the number sentence in each case. Cross out the cubes that are needed to subtract.

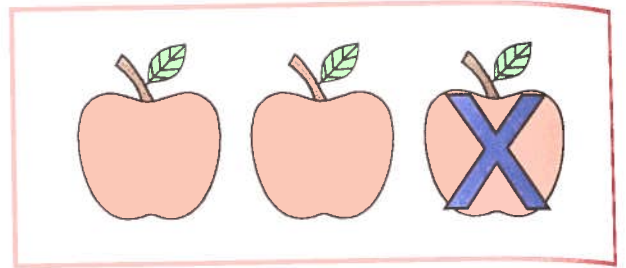


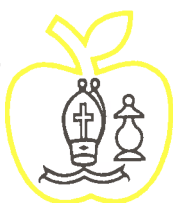
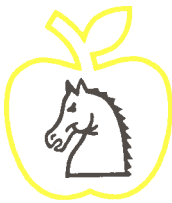
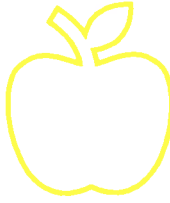
Name _____

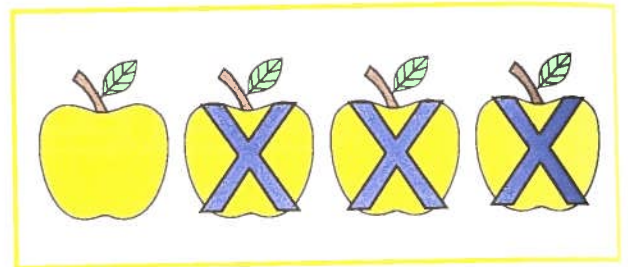
Lesson 3.10 Apple Subtraction Practice

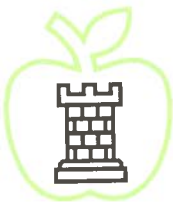

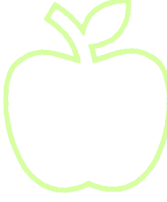
Use the chess number line and the pictures to subtract the chess apples.
Write the number sentence.

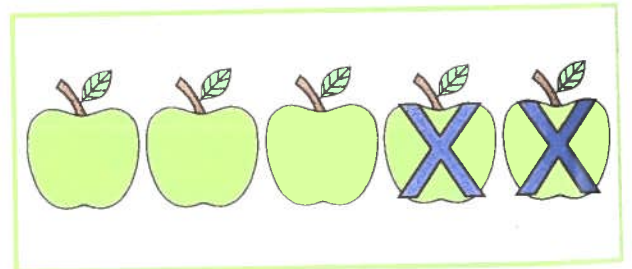
1.  -  = 

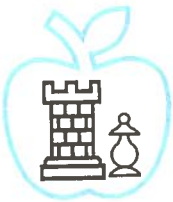




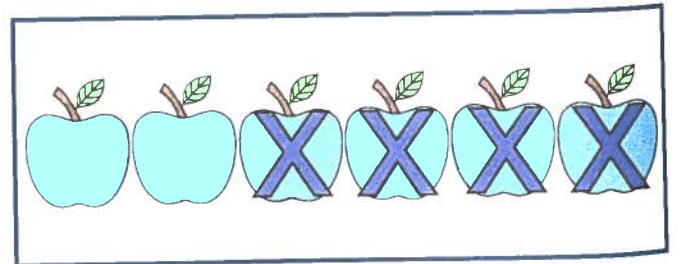
2.  -  = 



3.  -  = 



4.  -  = 



Name _____

Set of Pieces Subtraction Practice



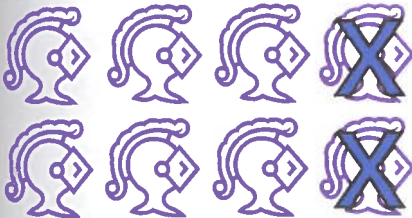
According to the pictures subtract the group of pieces, and write the number sentence on the right.

1.



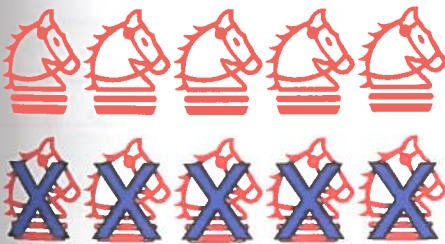
_____		_____		_____
-----	-----	-----
_____		_____		_____

2.



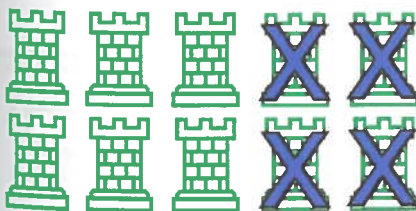
_____		_____		_____
-----	-----	-----
_____		_____		_____

3.



_____		_____		_____
-----	-----	-----
_____		_____		_____

4.



_____		_____		_____
-----	-----	-----
_____		_____		_____

Name _____

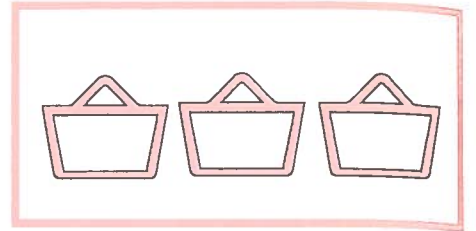
Baskets Subtraction Practice



Solve the following equations, and cross out the number of baskets you need to subtract. How many do you have left? Write the answer in the empty basket. Write the number sentence.

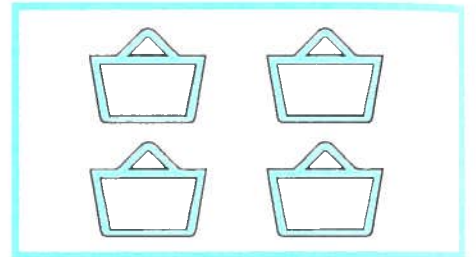
1.

$$\begin{array}{c} \text{Basket with Knight} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} - \begin{array}{c} \text{Basket with Pawn} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} = \begin{array}{c} \text{Empty Basket} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array}$$



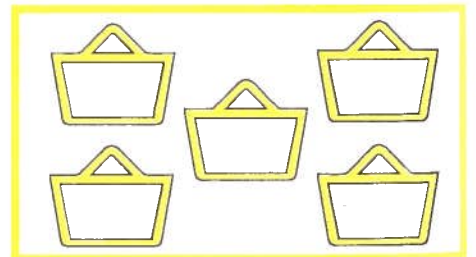
2.

$$\begin{array}{c} \text{Basket with Bishop and Pawn} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} - \begin{array}{c} \text{Basket with Bishop and Pawn} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} = \begin{array}{c} \text{Empty Basket} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array}$$



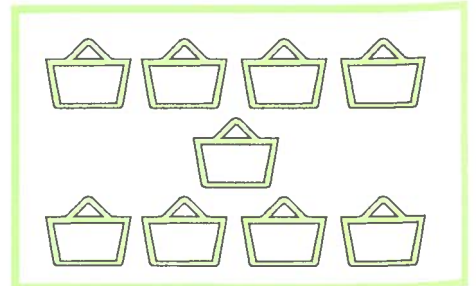
3.

$$\begin{array}{c} \text{Basket with Castle} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} - \begin{array}{c} \text{Basket with Pawn and Pawn} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} = \begin{array}{c} \text{Empty Basket} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array}$$



4.

$$\begin{array}{c} \text{Basket with King} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} - \begin{array}{c} \text{Basket with Castle and Pawn} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array} = \begin{array}{c} \text{Empty Basket} \\ \hline \text{---} \\ \text{-----} \\ \hline \end{array}$$



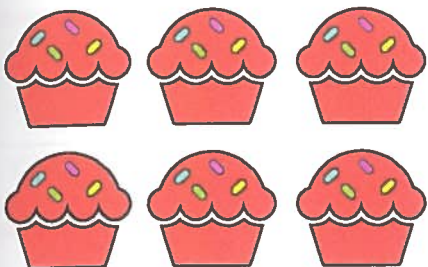
Name _____

Lesson 3.11 Snack Subtraction Practice



Solve the following equations, and cross out the number of objects you need to subtract. How many do you have left? Write the answer on the lines. Write the number sentence below each exercise.

1.

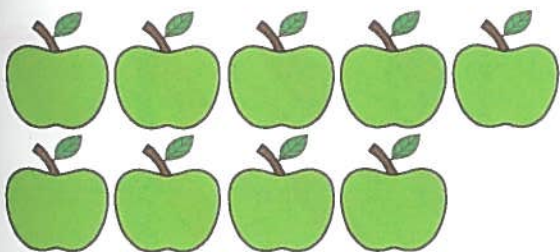


$$\text{Castle} + \text{Pawn} - \text{Two Knights} = \underline{\hspace{2cm}}$$

2.

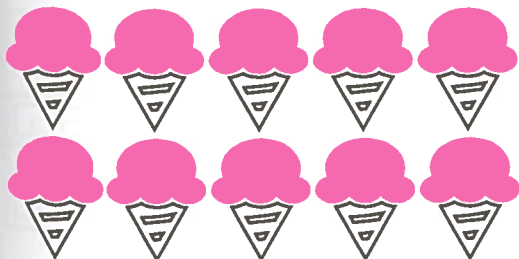


$$\text{Castle} + \text{Knight} - \text{King} + \text{Pawn} = \underline{\hspace{2cm}}$$



$$\text{Crown} - \text{Knight} = \underline{\hspace{2cm}}$$

4.



$$\text{Pawn} + \text{King} - \text{Castle} = \underline{\hspace{2cm}}$$

Name _____

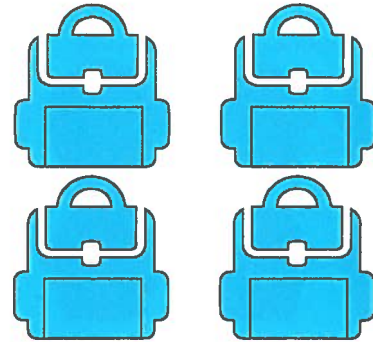
School Supplies Subtraction Practice



Solve the following equations, and cross out the number of objects you need to subtract. How many do you have left? Write the answer on the lines. Write the number sentence below each exercise.

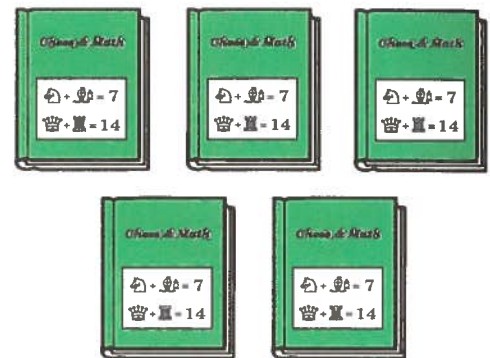
1.

$$\begin{array}{c} \text{King} \\ \text{Queen} \end{array} - \begin{array}{c} \text{King} \\ \text{Queen} \end{array} = \begin{array}{c} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$



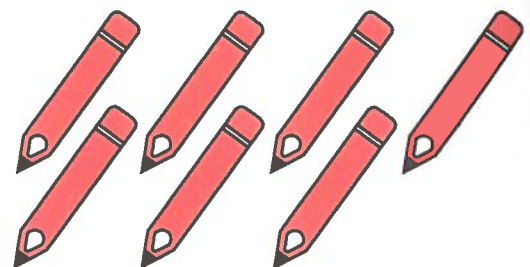
2.

$$\text{Castle} - \begin{array}{c} \text{King} \\ \text{Queen} \end{array} = \begin{array}{c} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$



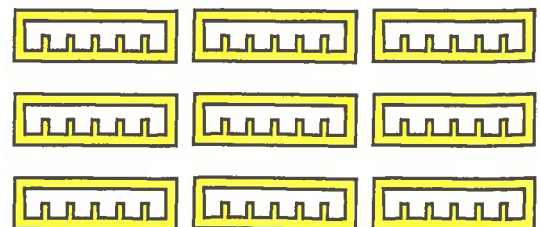
3.

$$\begin{array}{c} \text{Castle} \\ \text{King} \\ \text{Queen} \end{array} - \text{Knight} = \begin{array}{c} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$



4.

$$\text{Crown} - \text{Castle} = \begin{array}{c} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$



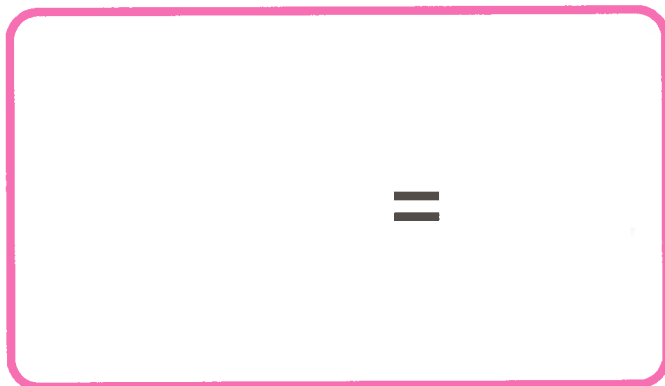
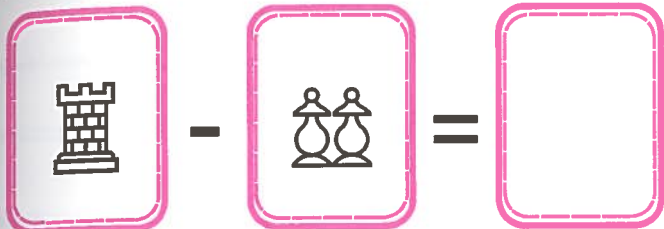
Name _____

Chess Cards Subtraction Practice

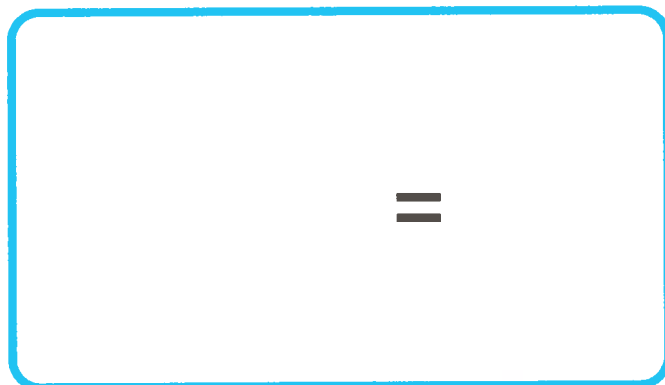
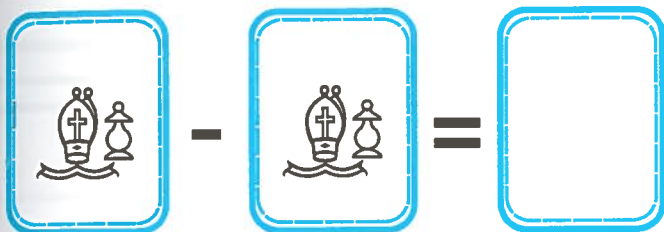


Use the chess number line to subtract the cards. Draw circles on the right to represent the subtraction problem. Write the number sentence.

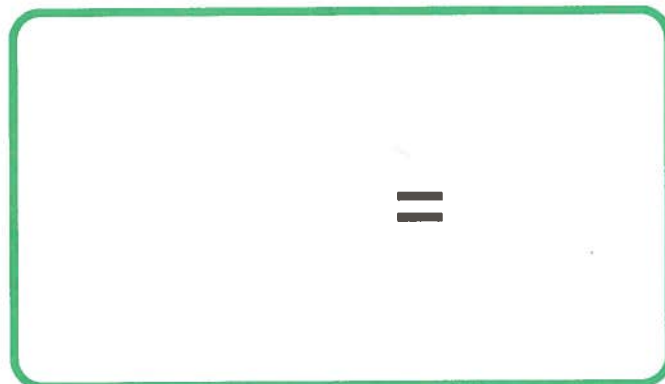
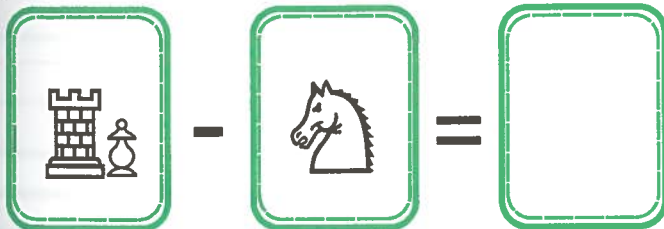
1.



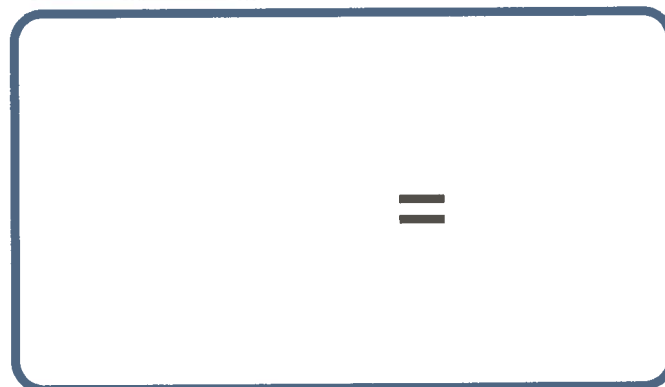
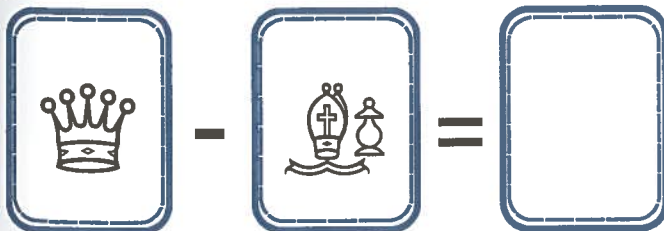
2.



3.

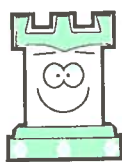


4.



Name _____

Chess Domino Subtraction Practice



Use subtraction to find the solution in the following chess domino's equations. Fill in the blank with the missing number. Draw circles to show the equations in the blank space.

1.

-			
<hr/>			

2.

-			
<hr/>			

3.

-			
<hr/>			

4.

-			
<hr/>			

5.

-			
<hr/>			

6.

-			
<hr/>			

Name _____

Lesson 3.12 The Chess Store - Word Problem

Solve each problem using the chess store information at the bottom of the page.
Write the number sentences.

Isabella, Peter, and Charlotte are playing the Supernationals, during their free time they went to The Chess Store to buy chess pieces for their chess collection.

1. Isabella bought a blue chess set and a green chess set. How much did she spend?

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} + \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

She spent _____ dollars.

2. Peter had \$10, and he bought a pink set. How much does he have left?

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} - \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

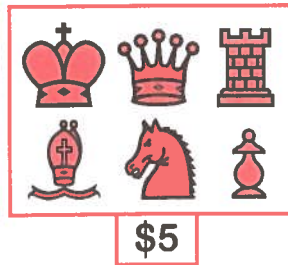
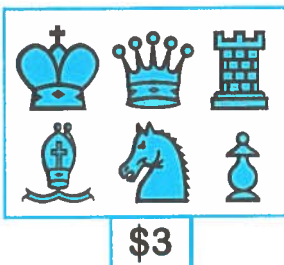
He has _____ dollar left.

3. Charlotte has \$10, and she spent all of her money on 2 sets of different colors.
What sets did she buy?

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} + \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

She bought a _____ set and a _____ set.

THE CHESS STORE



Name _____

Word Problem

Kindergarteners were having a fundraising party, and they were selling ice cream, cupcakes, donuts, apples, and popsicles. Use the table at the bottom of the page to write out the word problem solutions.

1. Aiden bought a cupcake and an apple. How much did he spend?

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} + \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

He spent _____ cents.

2. Emily bought ice cream and a popsicle. How much did she spend?

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} + \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

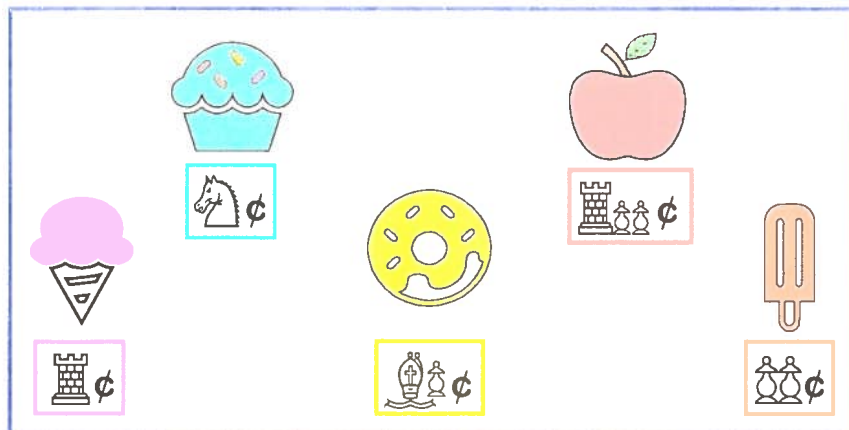
She spent _____ cents.

3. Jacob had 10¢, and he bought a donut, a popsicle, and a cupcake. How much does he have left?

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} + \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} + \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

$$\begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} - \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array} = \begin{array}{r} \text{_____} \\ \text{-----} \\ \text{_____} \end{array}$$

He has _____ cents left.



Name _____

Chess Cookies Word Problem

According to the word problem, cross out the number of chess cookies you need to subtract. How many do you have left? Write the answer in the blank.

1. Sofia had ten chess cookies, and she ate six. How many does she have left?

					_____	_____	_____
					_____	_____	_____

She has _____ cookies left.

2. Lucas had ten chess cookies, he ate three, and his brother ate four. How many does he have left?

					_____	_____	_____
					_____	_____	_____

He has _____ cookies left.

3. Olivia had ten chess cookies, she ate two, her sister ate three, and her brother didn't eat any cookies. How many does she have left?

					_____	_____	_____
					_____	_____	_____

She has _____ cookies left.

Name _____

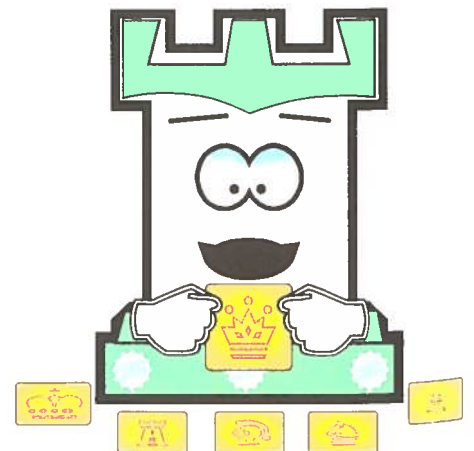
The Rookie Cookie Word Problem

The Rookie Cookie was in our neighborhood yesterday. Let's find out what happened in our story problem.

1. Aria had some chess cookies in her bag. She noticed that the Rookie Cookie ate six. Now she only has three cookies in her bag. How many cookies did she have at the beginning?

2. Elijah had ten chess cookies in his bag. He found only three cookies. How many of the Elijah's cookies did the Rookie Cookie eat?

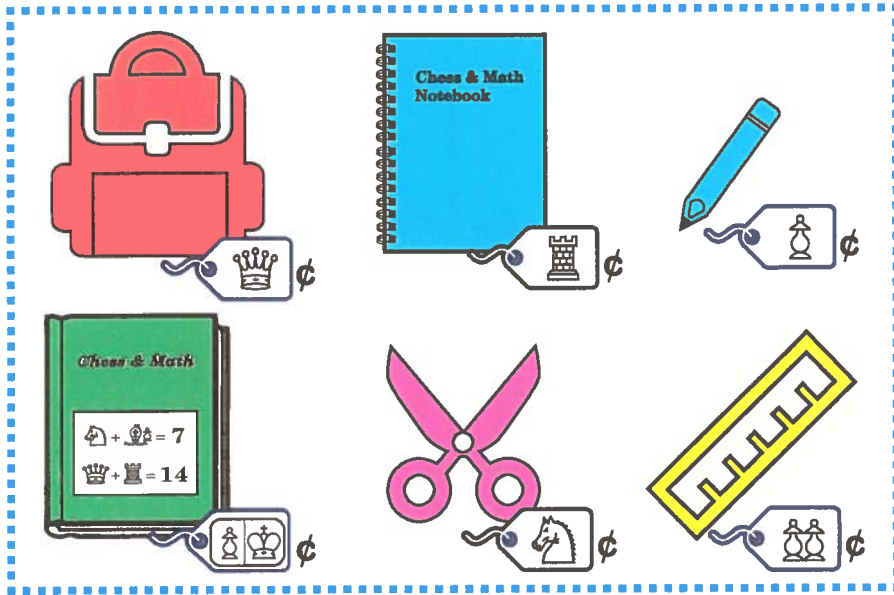
3. Lily had nine cookies in her bag. She found only four cookies. Her brother gave her three more cookies. How many cookies did the Rookie Cookie eat? How many cookies does she have now?



Name _____

Lesson 3.13 School Supplies Word Problem

Daniel, Jasmine, and Christopher went to the store to buy some school supplies they needed for school. Help them find out the solution to their story problem.



1. Daniel bought a green book, a pencil, and a ruler. How much did he spend?

_____ ¢.

2. Jasmine had some money. She bought a notebook, two pencils, and one pair of scissors. If she got 2¢ back, how much money did she have at the beginning?

_____ ¢.

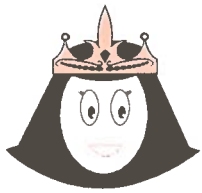
3. Christopher had some money. He bought a backpack and one pencil. If he got 5¢ back, how much money did he have at the beginning?

_____ ¢.



Name _____

Decomposing Numbers Up to 10



Circle the correct answers in each box. Find the patterns.





How do you make 3?

 , 



How do you make 5?

 , 

How do you make 7?

 , 

How do you make 9?

 , 

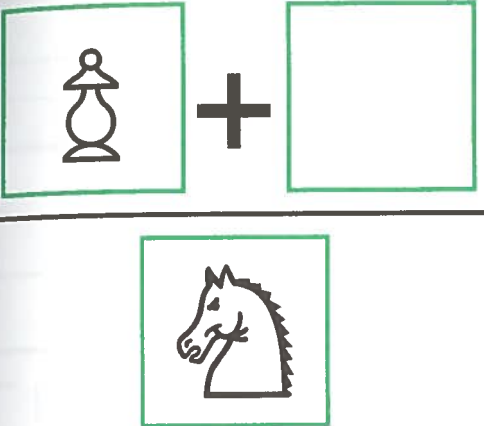


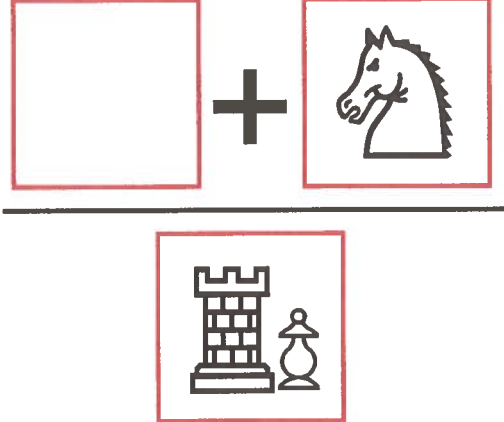
Name _____

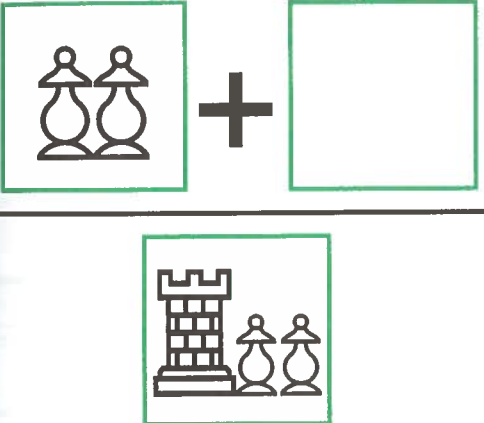
Find the Missing Number

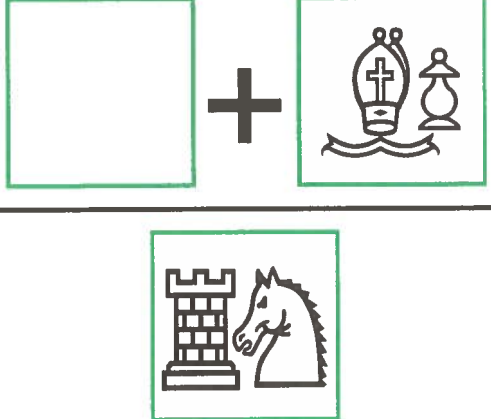


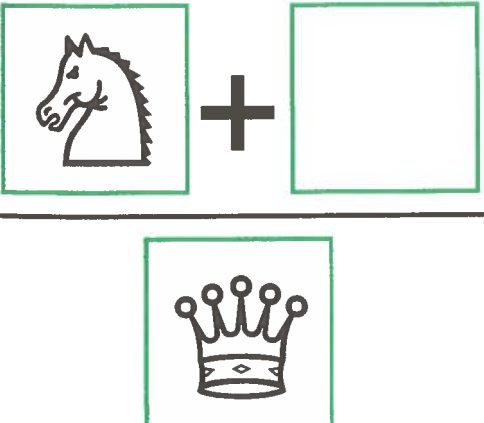
Identify the number represented by the chess pieces.
Fill in the missing numbers of each addition number bond.

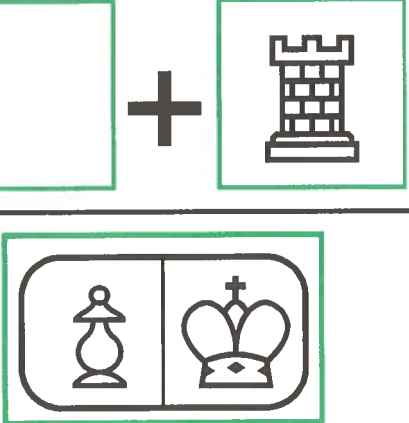
1. 

2. 

3. 

4. 

5. 

6. 

Name _____

Coloring my Addition

Follow the instructions below.



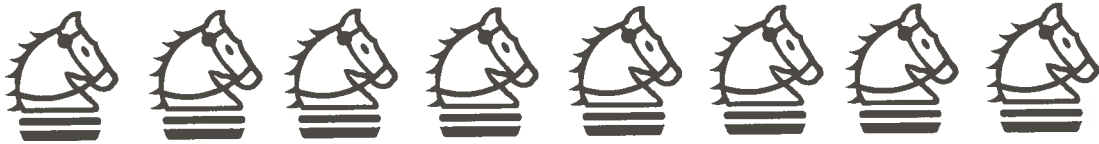
Color 4 pawns in blue.

How many white pawns are left? _____

Write the number sentence to represent the picture.

_____ + _____ = _____

.....



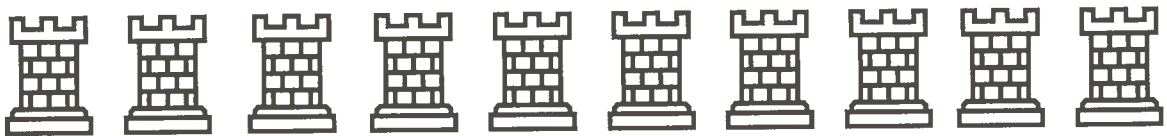
Color 3 knights in green.

How many white knights are left? _____

Write the number sentence to represent the picture.

_____ + _____ = _____

.....



Color 6 rooks in yellow.

How many white rooks are left? _____

Write the number sentence to represent the picture.

_____ + _____ = _____

.....

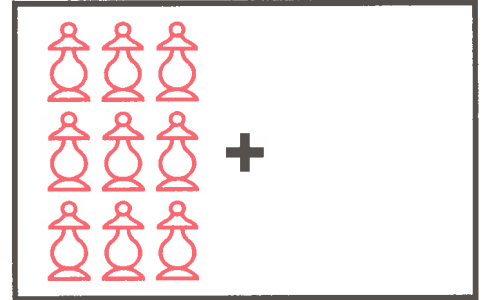
Name _____

Lesson 3.14 Let's Make 10

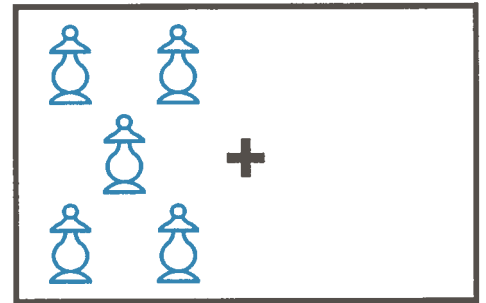
Find the missing number that makes 10. Draw the missing pawn(s) in the box on the right to complete the equation.



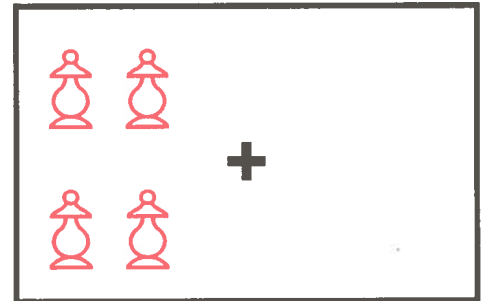
1.



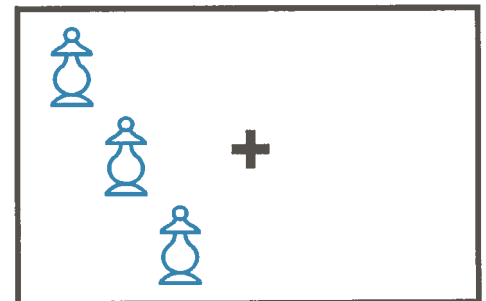
2.



3.



4.



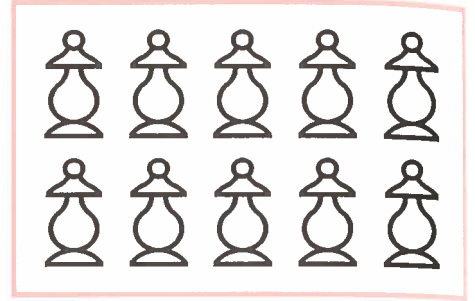
Name _____

Subtracting Numbers Up to 10

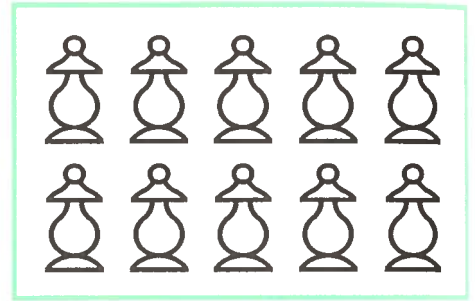


Use subtraction to solve the following equations. Use the pawn box on the right to represent your problem.

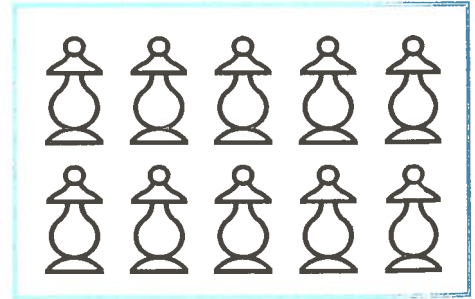
1.



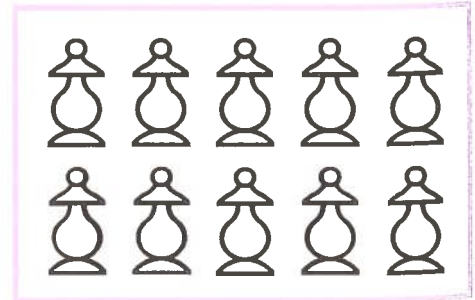
2.

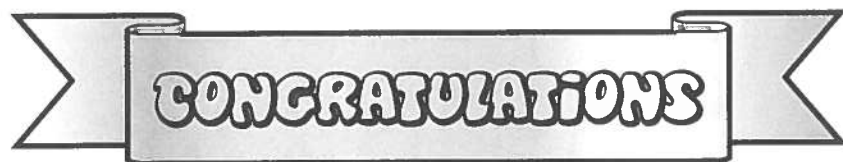


3.



4.





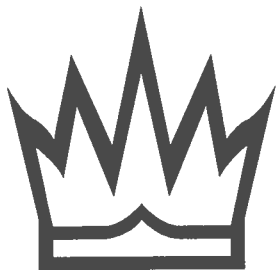
level 
COMPLETED!

I understand addition as putting together and adding to,
and I understand subtraction as taking apart and taking from.

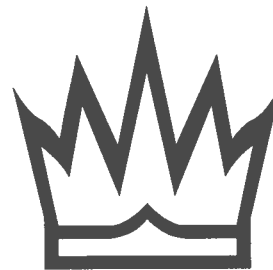
I can solve addition and subtraction problems using the
chess pieces.

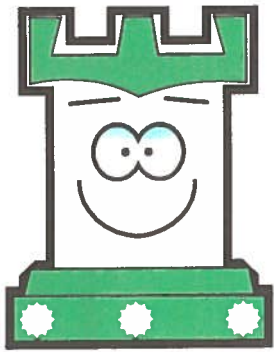
I can use chess dominoes to solve addition and subtraction
problems.

I know how to move the chess queen.



CHESS & MATH

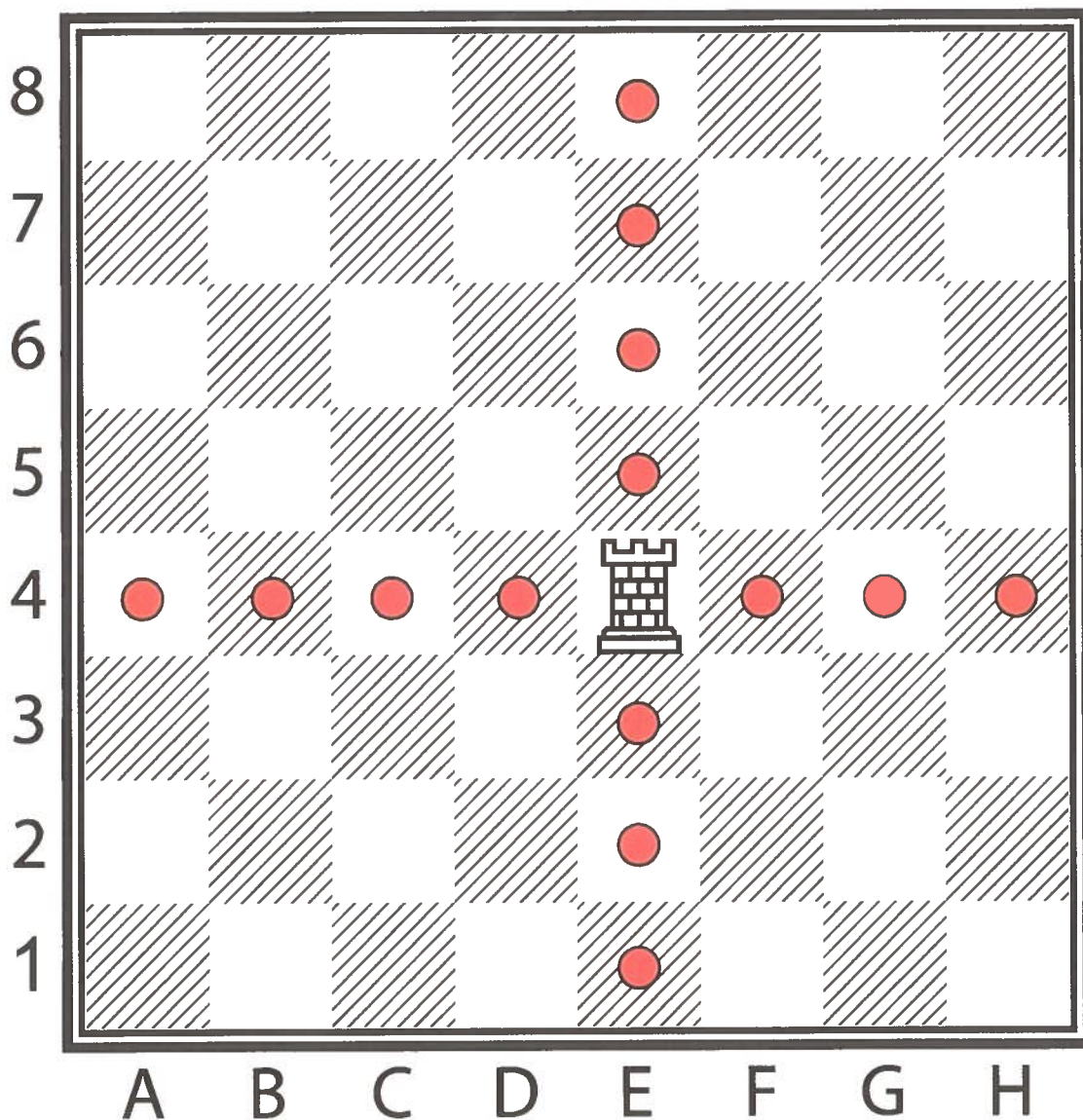




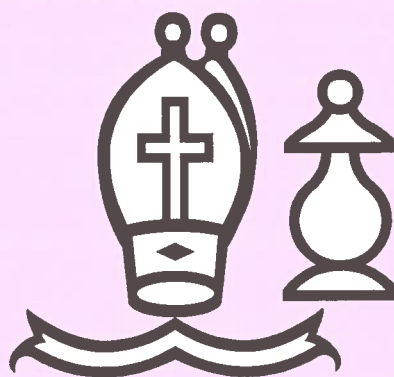
THE ROOK

Hi friends!


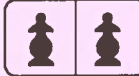





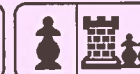


I am the rook, and I can move to any number of squares, but only in straight lines up and down or side to side. My numerical value is 5. I usually protect the king with a special move called *Castling*.

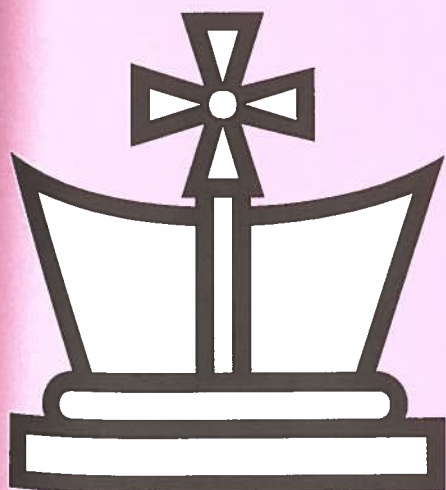





CHAPTER





NUMBER & OPERATIONS IN BASE TEN

 10	 11	 12	 13	 14
 15	 16	 17	 18	 19



	
+	?
<hr/>	
	?

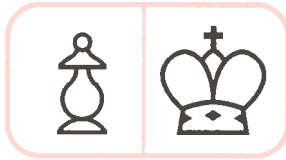
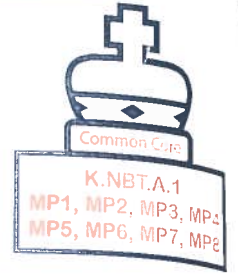
	
-	?
<hr/>	
?	

Work with numbers 11-19 to gain foundations for place value.

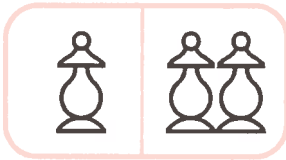
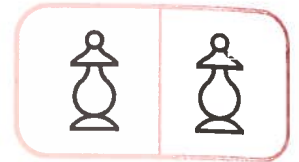
Name _____

Lesson 4.1 Matching Numbers

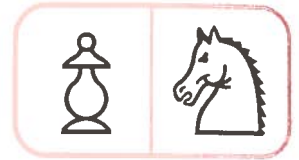
Trace a line to match the chess dominoes with the number they represent.



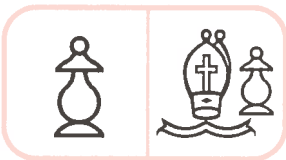
10



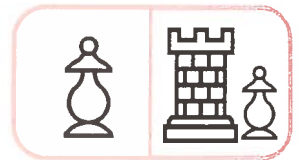
11



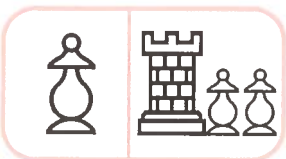
12



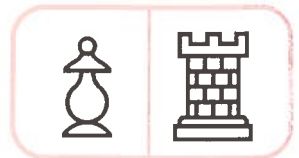
13



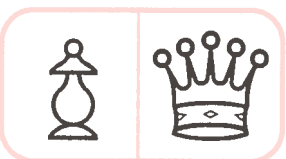
14



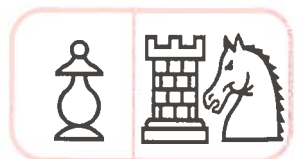
15



16



17



18

19

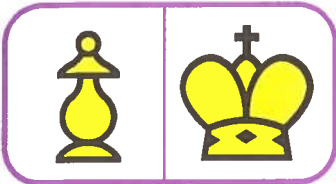
Name _____

Chess Domino Practice

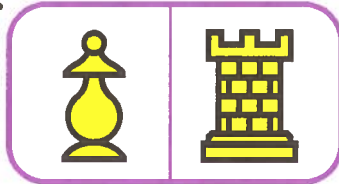


Write the two-digit number represented by each chess domino.

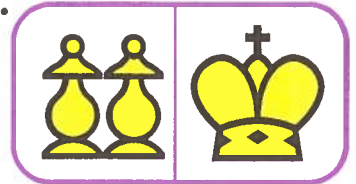
1.



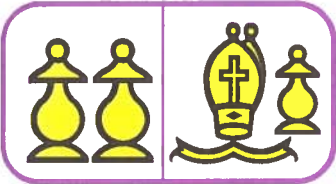
2.



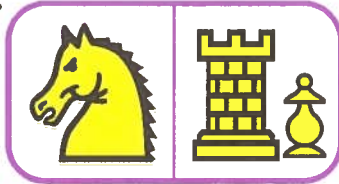
3.



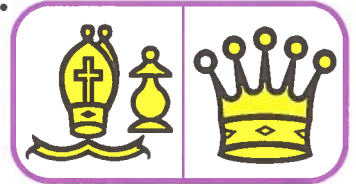
4.



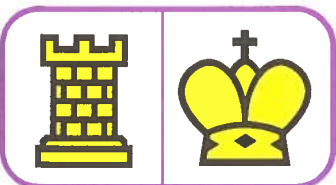
5.



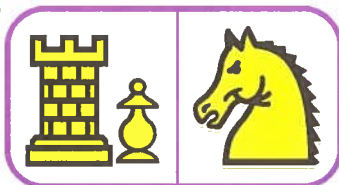
6.



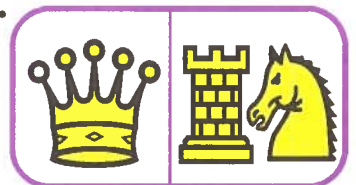
7.



8.



9.

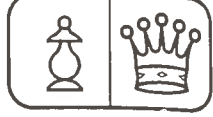
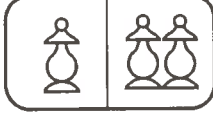
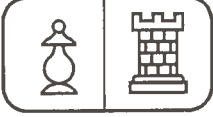
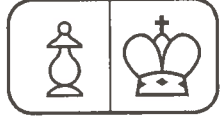


Name _____

Lesson 4.2 Finding my Number



Draw a line to match the chess domino with the numbers and the chess cubes. Color the chess pieces and chess cubes with the same color of the matching number.



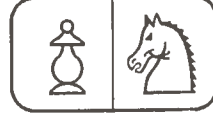
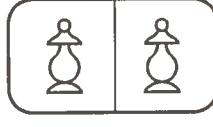
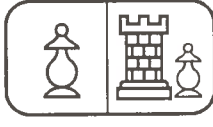
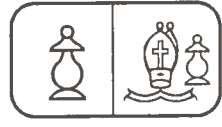
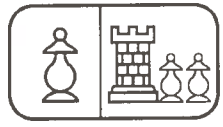
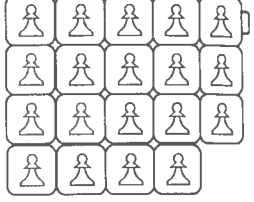
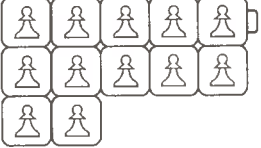
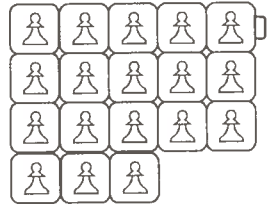
10

18

12

15

19



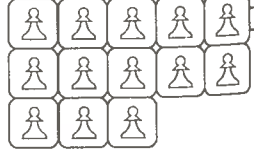
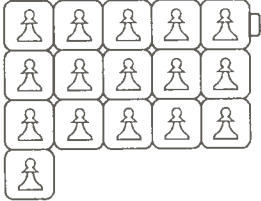
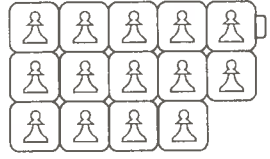
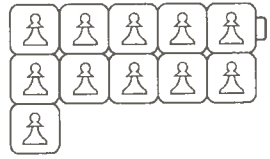
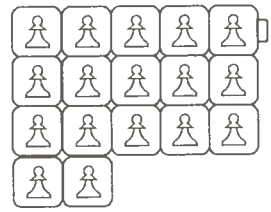
14

11

17

13

16



Name _____

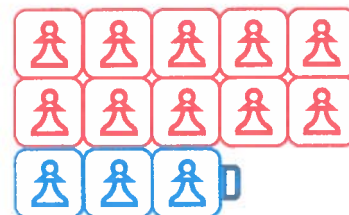
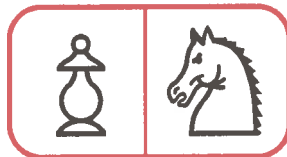
Addition Practice

Use the chess cubes on the right to fill in the blank of the following equations.



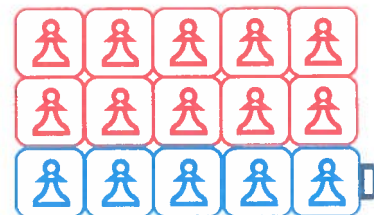
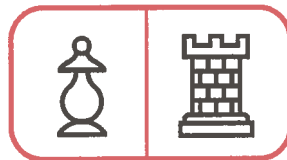
1.

_____ + _____ = _____



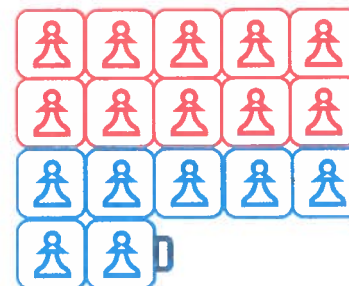
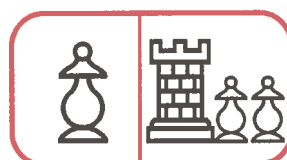
2.

_____ + _____ = _____



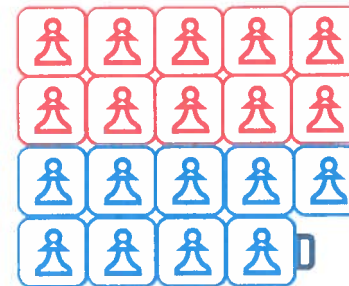
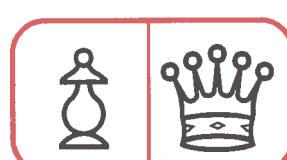
3.

_____ + _____ = _____



4.

_____ + _____ = _____



Name _____

Finding my Missing Number



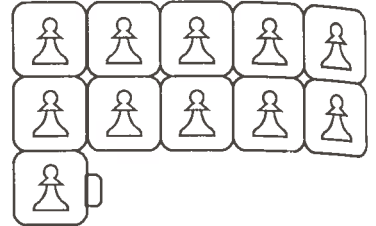
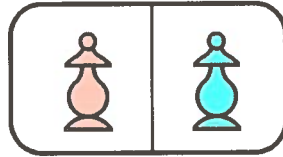
Find the missing number to complete the following equations.
Color the chess cubes using red for tens and blue for ones.

1.

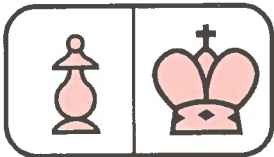


.....

.....

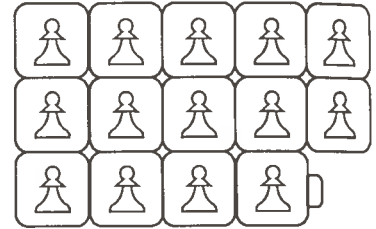
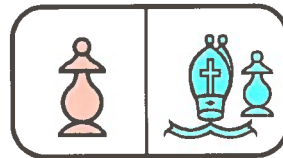


2.



.....

.....

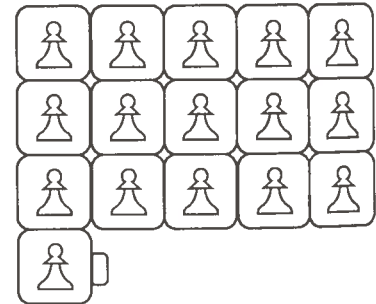
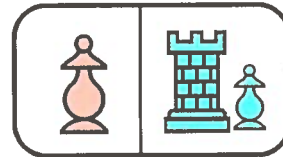


3.

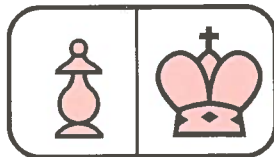


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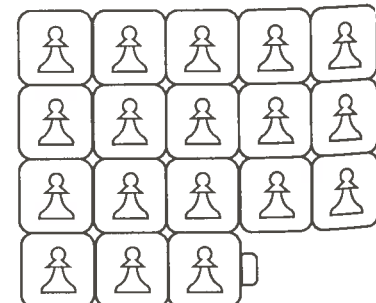
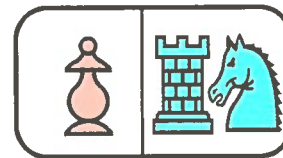


4.



.....

.....



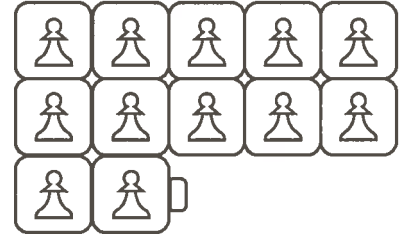
Name _____

Lesson 4.3 Addition Practice

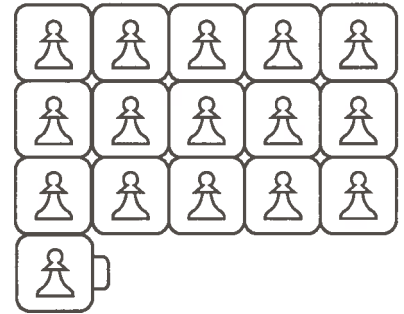
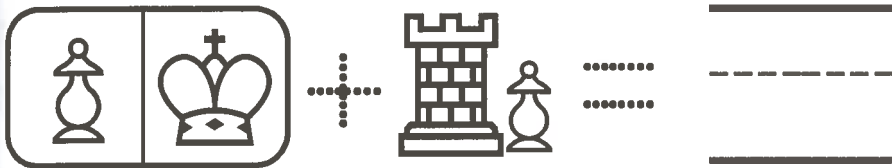


Use addition to solve the following equations. Use two different colors to show the addition on the chess cubes. Write the number sentence below each exercise.

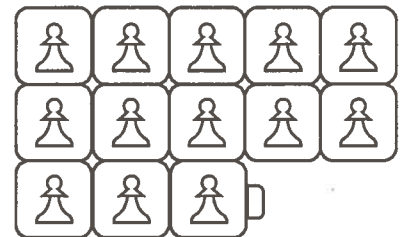
1.



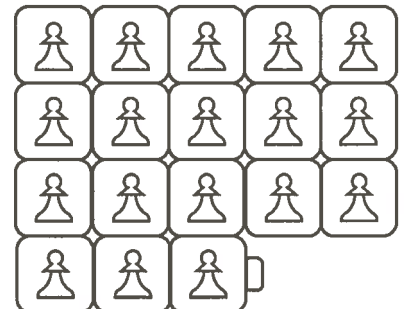
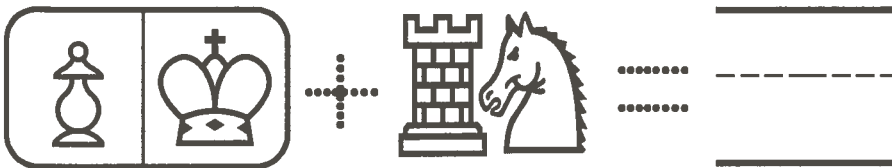
2.



3.



4.



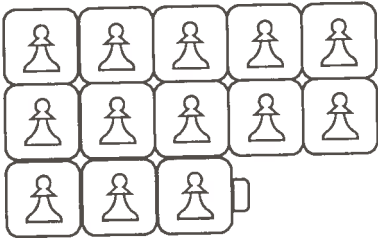
Name _____

Making Up Addition Practice

Color the chess cubes using two different colors to make your addition problem.



1.

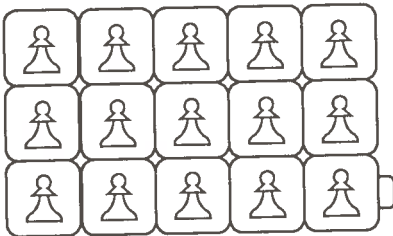


.....

.....



2.

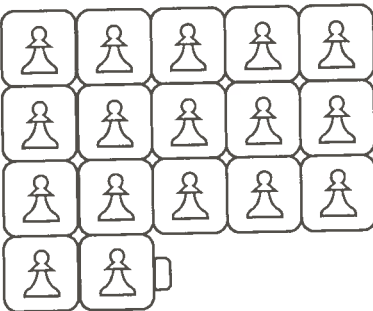


.....

.....



3.

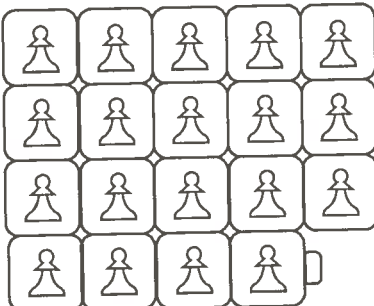


.....

.....



4.



.....

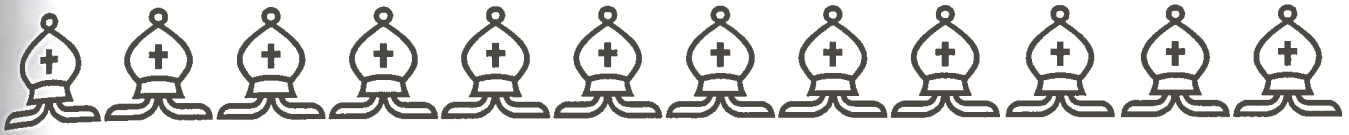
.....



Name _____

Colorful Addition

Follow the instructions below.



Color 10 bishops in blue.

How many white bishops are left? _____

Write the number sentence to represent the picture.

_____		_____	_____
-----	+	-----
_____		_____	_____



Color 4 kings in green.

How many white kings are left? _____

Write the number sentence to represent the picture.

_____		_____	_____
-----	+	-----
_____		_____	_____



Color 10 queens in yellow.

How many white queens are left? _____

Write the number sentence to represent the picture.

_____		_____	_____
-----	+	-----
_____		_____	_____

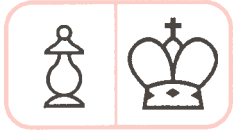
Name _____

Lesson 4.4 Practice with the Ten Frame

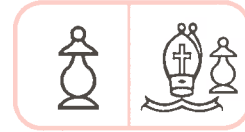


Draw circles on the ten frames to represent the number indicated by the chess domino.

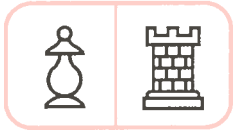
1.



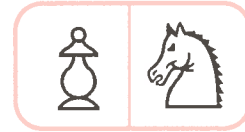
2.



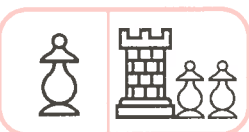
3.



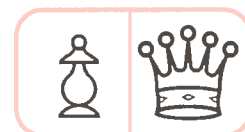
4.



5.



6.



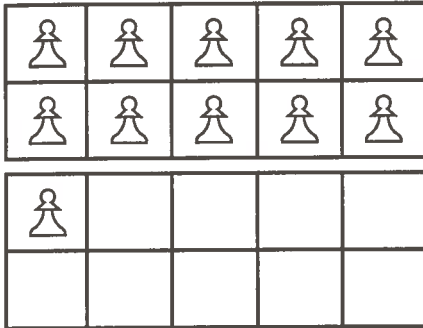
Name _____

Counting on the Ten Frame

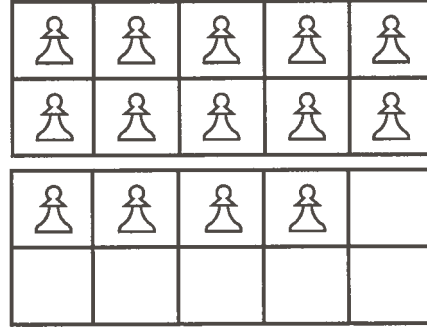


Write the number in the blank square that represents the chess pawns in the ten frames. Color the tens red and the ones blue.

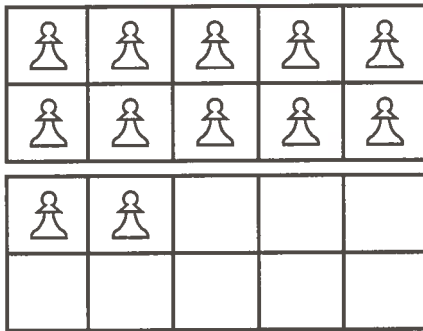
1.



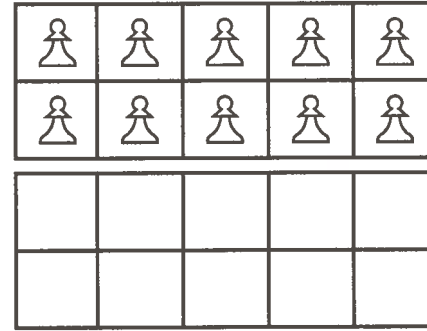
2.



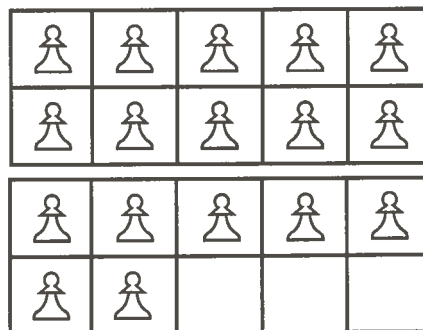
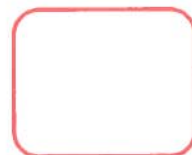
3.



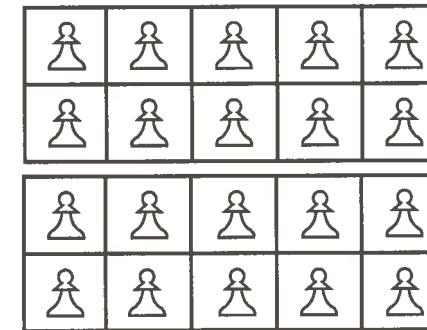
4.



5.



6.



Name _____

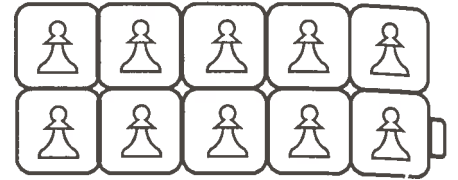
Lesson 4.5 Subtraction with Chess Domino



Use subtraction in the following equations. Cross out the pawns in the cube train to represent the problem. Write the number sentence.

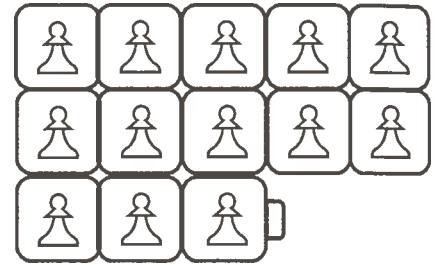
1. - =

 - - - - -



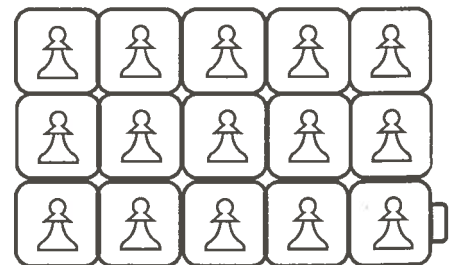
2. - =

 - - - - -



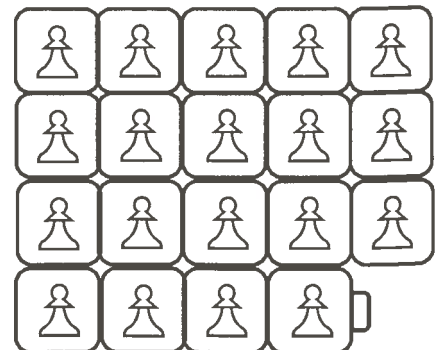
3. - =

 - - - - -



4. - =

 - - - - -



Name _____

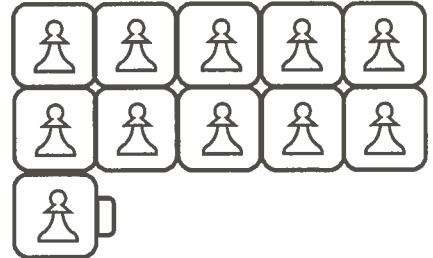
Find the Missing Number I



Find the missing number in the following equations. Cross out the pawns in the cube train to represent the problem. Write the number sentence.

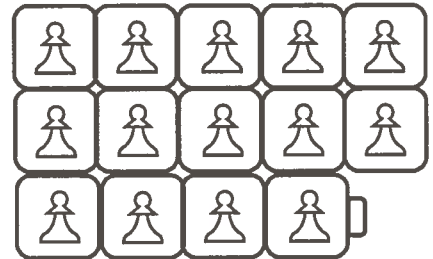
1. - =

 - - - - -



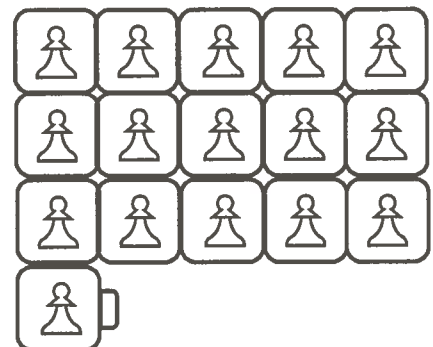
2. - =

 - - - - -



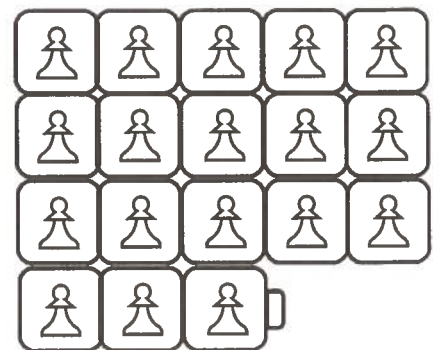
3. - =

 - - - - -



4. - =

 - - - - -



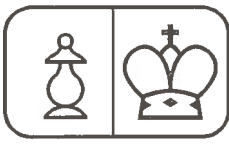


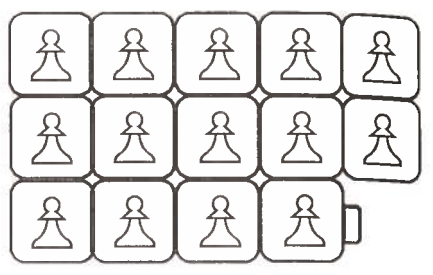
Name _____

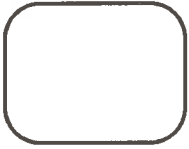
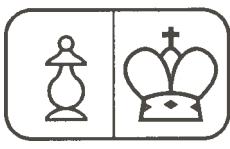

Find the Missing Number II

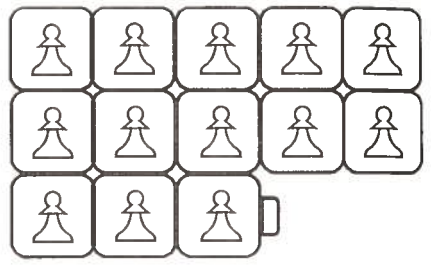



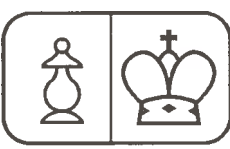
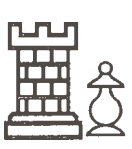
Find the missing number in the following equations. Cross out the pawns in the cube train to represent the problem. Then, write the number sentence.

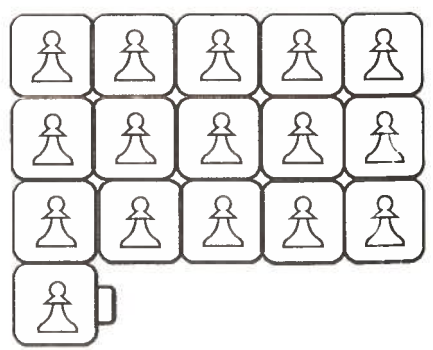
1.  -  = 


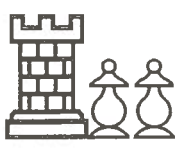
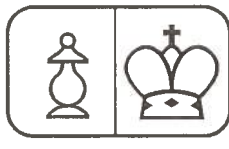


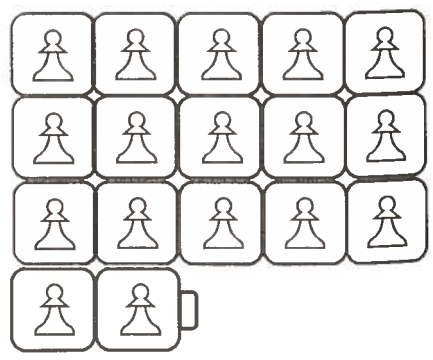
2.  -  = 



3.  -  = 



4.  -  = 



Name _____

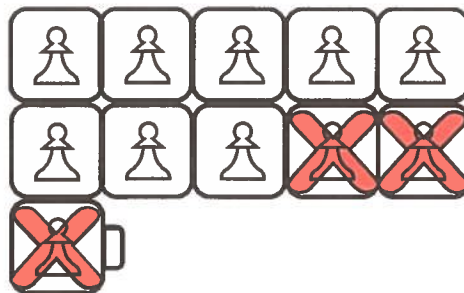
Lesson 4.6 Chess Cubes Subtraction Practice



Write the number sentence according to the chess cubes.

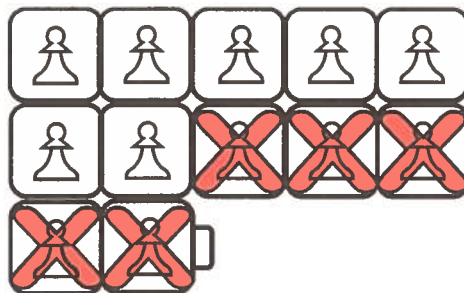
1. _____

.....



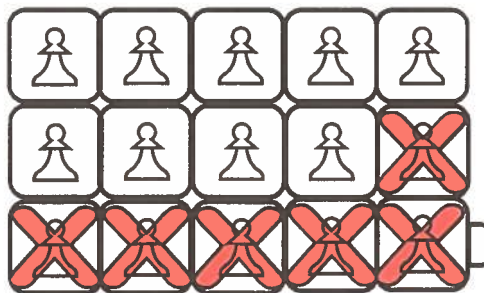
2. _____

.....



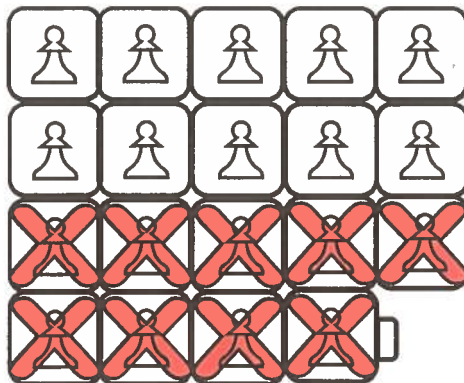
3. _____

.....



4. _____

.....



Name _____

Chess Domino - Missing Number



Find the missing number in each equation. Write the number sentences in the blank boxes.

1.

2.

3.

4.

5.

6.

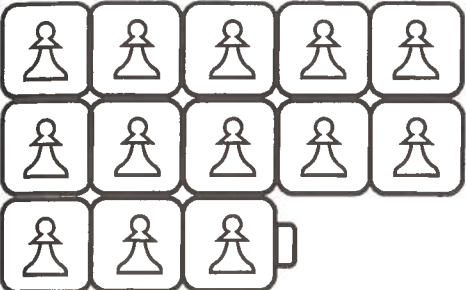
Name _____

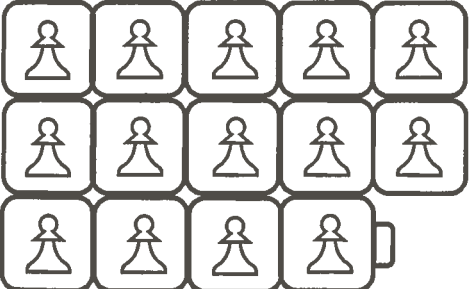
Lesson 4.7 Making Up Subtraction Practice

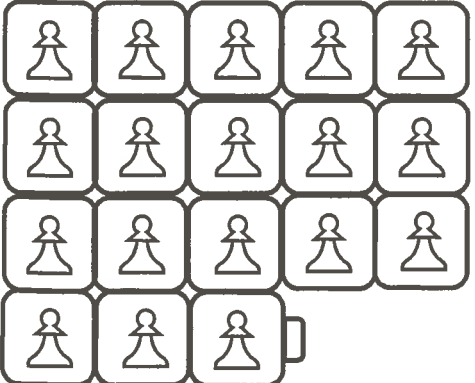


Cross out the chess cubes to make your subtraction problem.

1.  _____

2.  _____

3.  _____

4.  _____

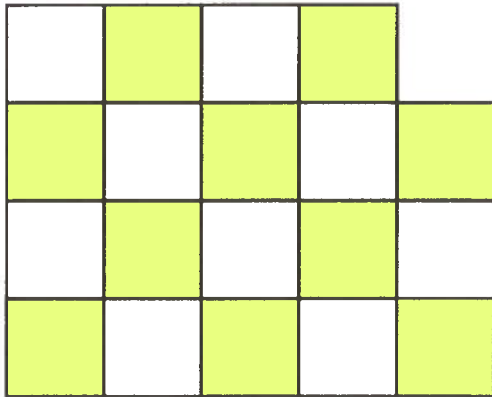
Name _____

Chess Squares Subtraction Practice

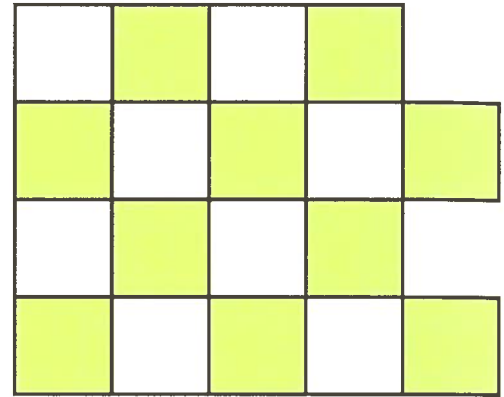


Count the total number of squares. Subtract the green squares.
How many squares do you have left? Write the number sentence.

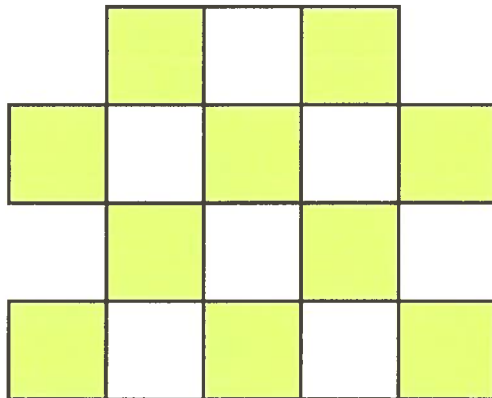
1.



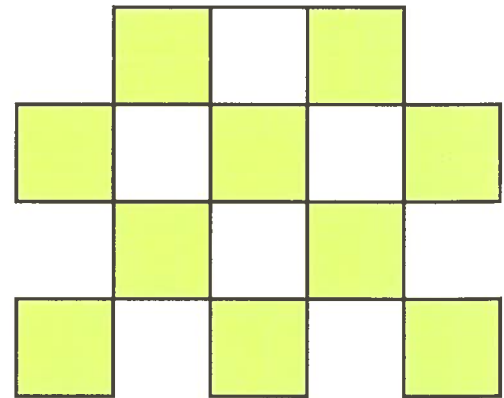
2.



3.



4.





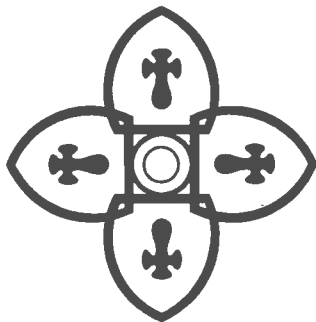
Level 
COMPLETED!

I can use chess dominoes to understand the place value (tens and ones).

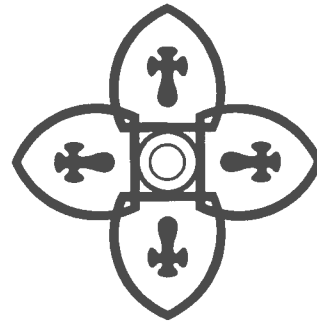
I can use tens frames to show the value of the chess domino.

I can use chess dominoes to solve addition and subtraction problems with numbers between 1-19.

I know how to move the chess rook.



CHESS & MATH

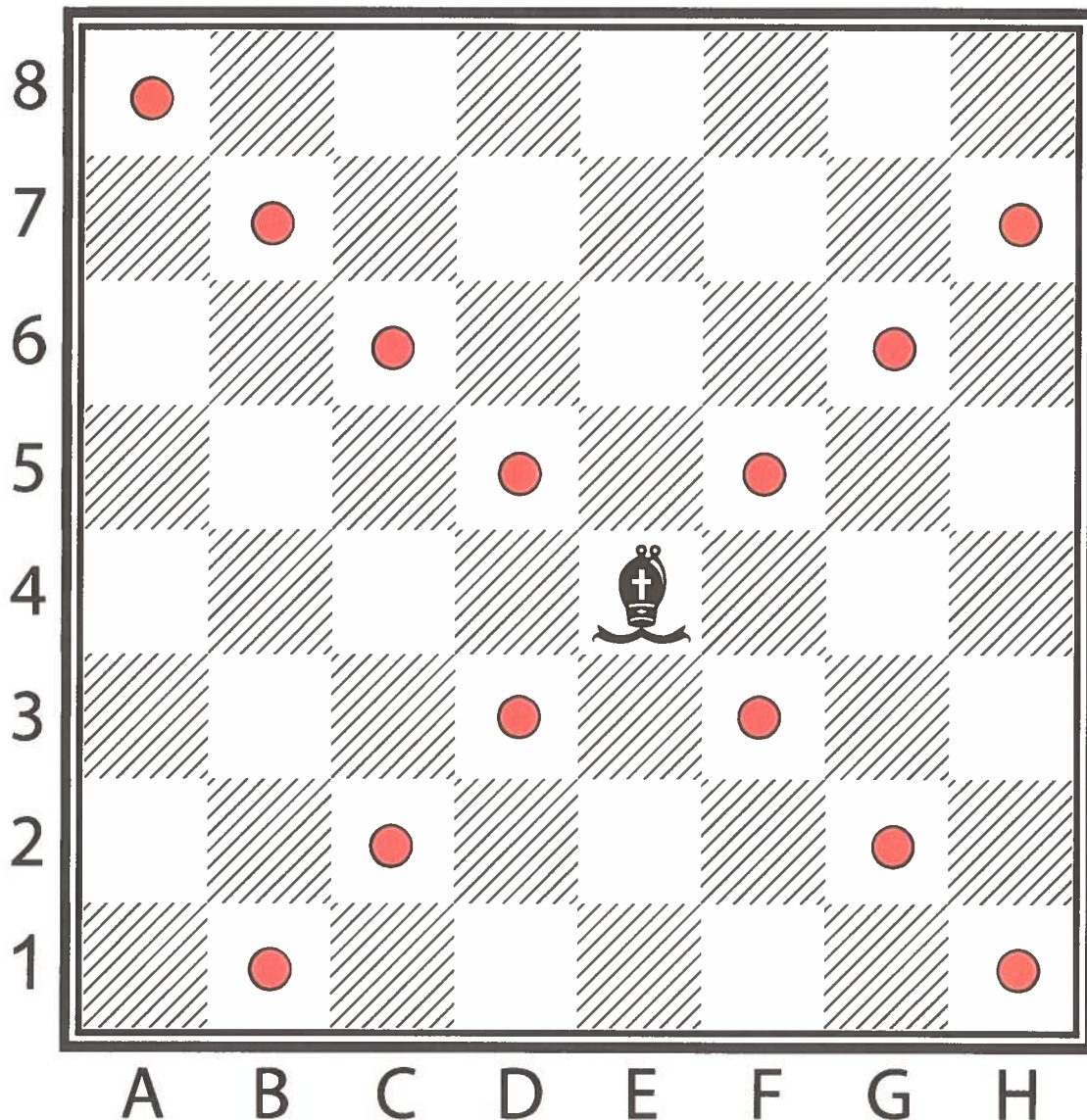




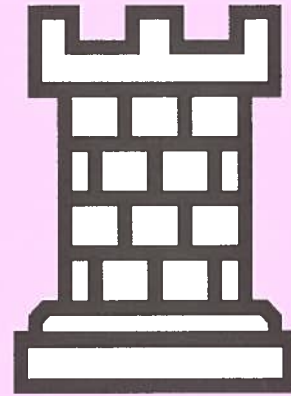
THE BISHOP

Hi friends!

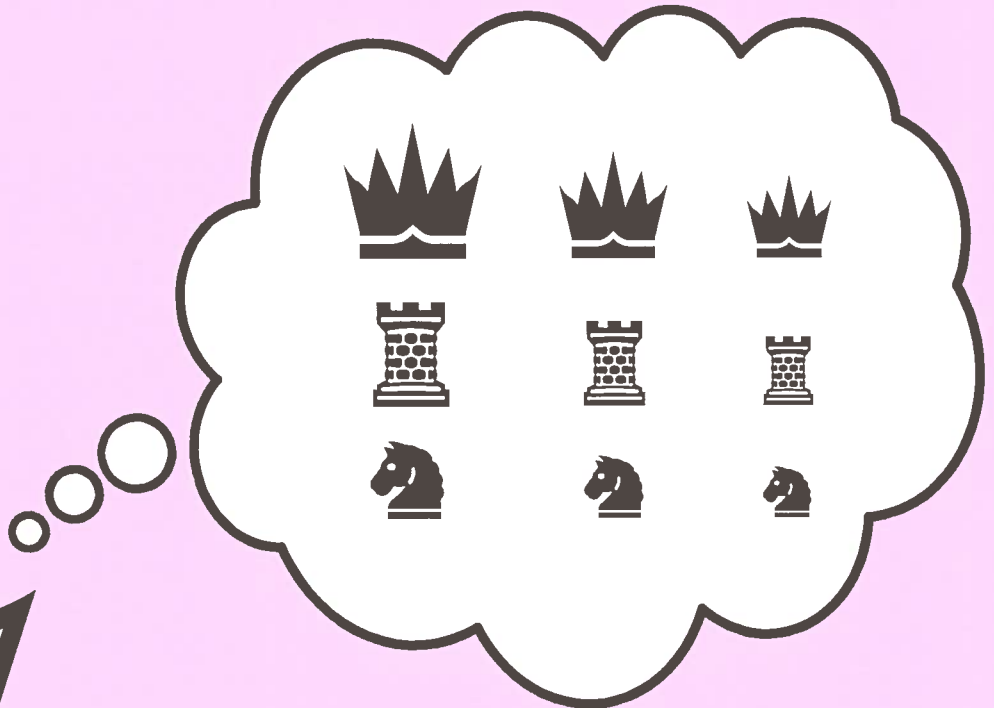
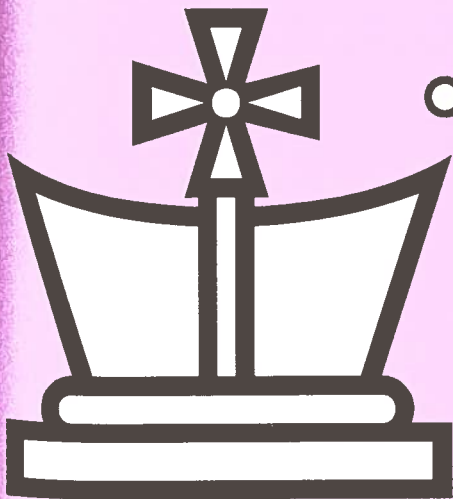
I am the bishop, and I can move any number of squares, but only along the diagonals and until another piece gets in my way. My numerical value is 3.



CHAPTER



MEASUREMENT & DATA



Describe and compare measurable attributes.

Name _____

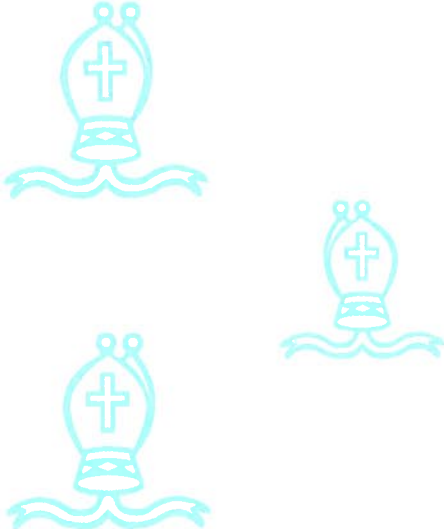
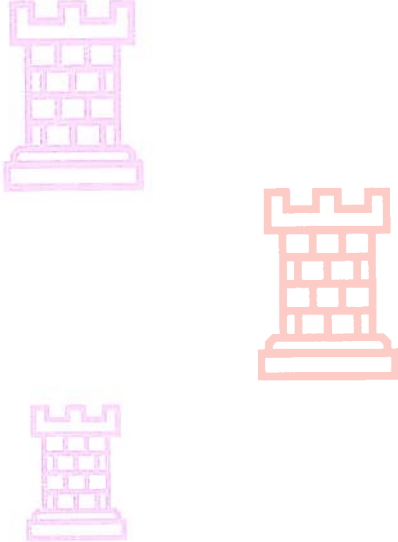
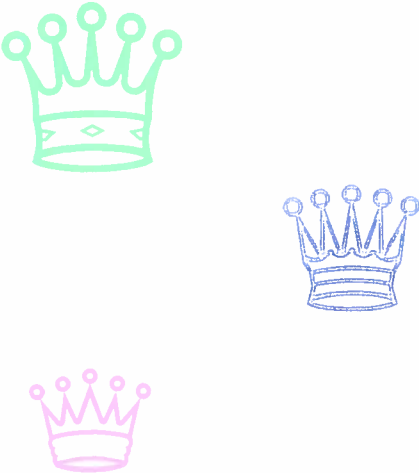

Lesson 5.1 Comparing Chess Pieces

Describe the attributes of the pieces below. Identify the similarities and differences.



Common Core

K.MD.A.1, K.MD.A.2
MP1, MP2, MP3, MP4,
MP5, MP6, MP7, MP8.

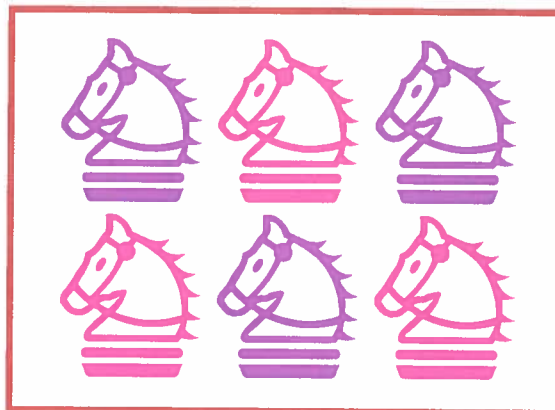
	
	

Name _____

Similarities & Differences



Look at the pictures below, and compare the one on the left with the one on the right. Fill in the table with the attributes of the images.



Same	Different

Name _____

Measuring Chess Cubes



Identify and circle the tallest chess cube in each case.

Name _____

Lesson 5.2 Measuring Height I



Using the chess ruler, measure the height of each pawn in inches.
Record the answer in the squares below each pawn. Circle the tallest pawn,
and place an X on the smallest pawn.

The image shows a measurement activity. On the left, three chess pawns are lined up on a horizontal blue line. From left to right, they are purple, green, and red. Below each pawn is a square box of the same color for recording the measurement. To the right is a vertical blue ruler with markings every 1/8 inch. The ruler is labeled with chess pieces: a king and queen at the top, followed by a crown, a rook and knight, a rook and two pawns, a rook and a pawn, a rook, a bishop and pawn, a knight, two pawns, and a single pawn at the bottom.

Name _____

Measuring Height II



Using the chess ruler, measure the height of each pine tree in inches. Record the height below each tree. Circle the tallest tree, and place an X on the smallest tree.

The chess ruler on the right has the following pieces as markers from top to bottom: King and Queen, King, Castle and Knight, Castle and Pawn, Castle and Pawn, Castle, Bishop and Pawn, Knight, Pawn and Pawn, and Pawn.

Below the trees are three empty square boxes for recording the height of each tree.

Name _____

Measuring Height III



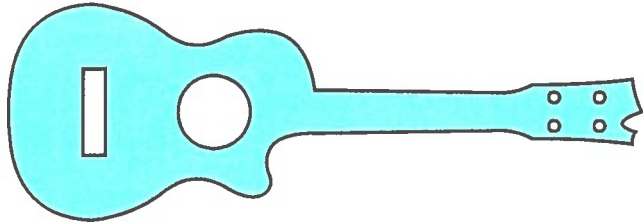
Using the chess ruler, measure the height of each stack in inches. Record the answer below each stack. Circle the tallest stack, and place an X on the smallest stack.

The activity features three stacks of chess pieces on a horizontal baseline. The left stack consists of 8 purple pawns. The middle stack consists of 10 green pawns. The right stack consists of 5 red pawns. Below each stack is a square box for recording the measurement: a purple box under the purple stack, a green box under the green stack, and a red box under the red stack. To the right is a vertical chess ruler with a scale from 0 to 12 inches. The ruler is marked with chess pieces: a king and queen at the 12-inch mark, a crown at 11 inches, a rook and knight at 10 inches, a rook and two pawns at 9 inches, a rook and a pawn at 8 inches, a rook at 7 inches, a bishop and knight at 6 inches, a knight at 5 inches, two pawns at 4 inches, and a pawn at 3 inches.

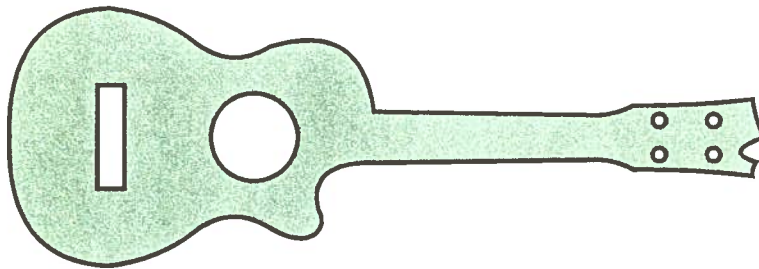
Name _____

Measuring my Guitars

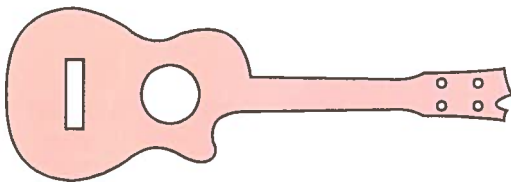
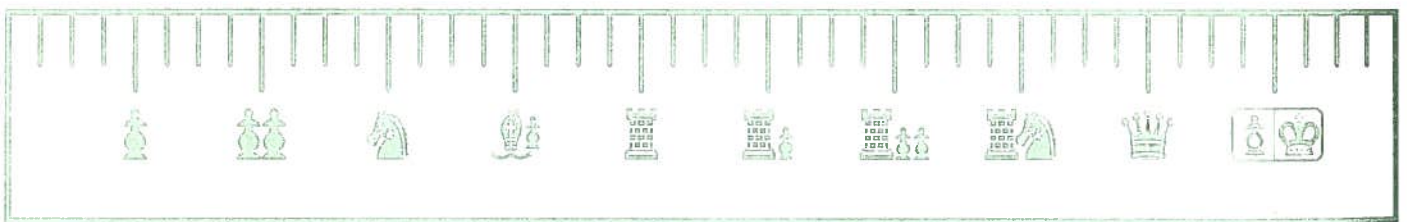
Use the chess ruler to measure each guitar. Record the length on the blank line. Then, circle the longest guitar, and put an X on the smallest guitar.



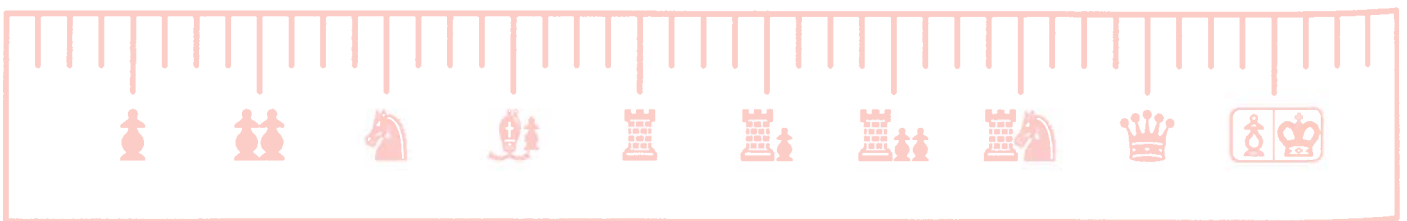
_____ inches



_____ inches



_____ inches



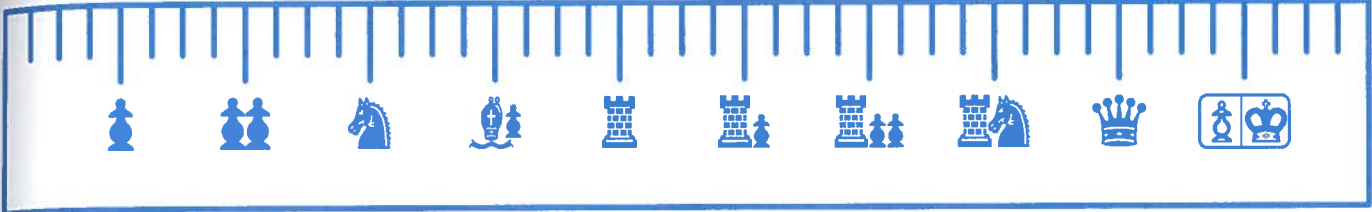
Name _____

Lesson 5.3 Measuring Animals

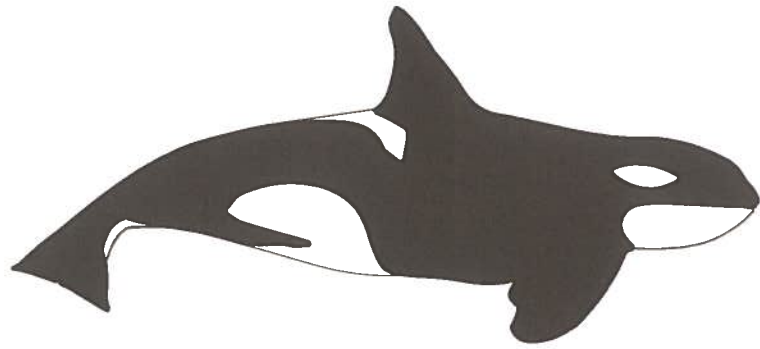
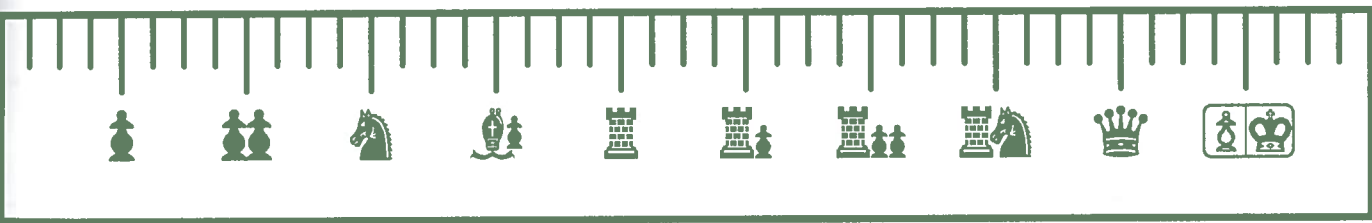
Use the chess ruler to measure each animal. Record the length on the blank line. Then, circle the longest animal, and put an X on the smallest animal.



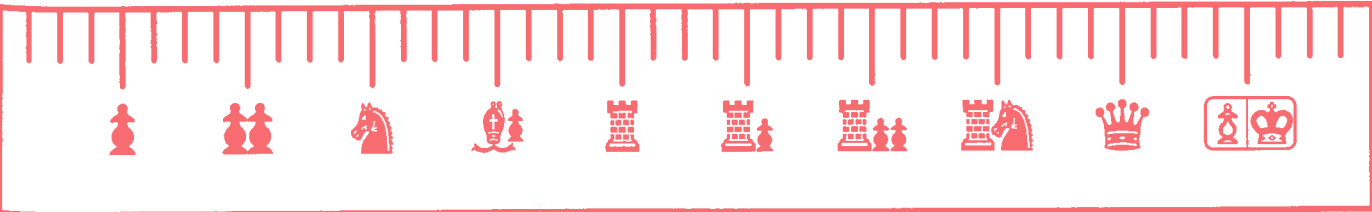
_____ inches



_____ inches



_____ inches



Name _____

Bigger or Smaller



Follow the instructions in each box.
Find the patterns on the apples. What comes next?



Circle the bigger piece

Circle the smaller piece



Circle the smaller piece

Circle the bigger piece

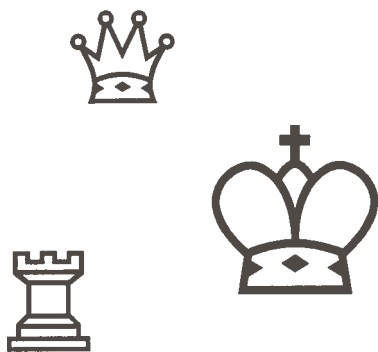


Name _____

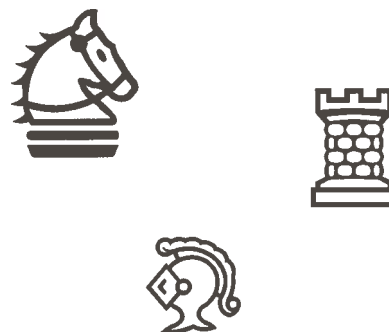
Color the Larger or Smaller



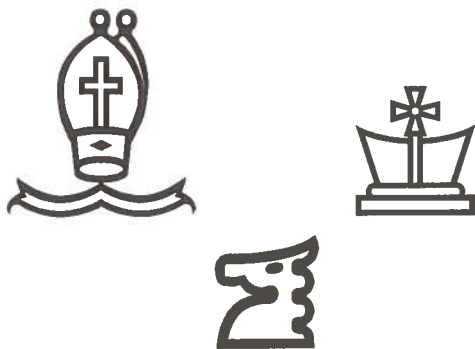
Color the larger or smaller piece according to the instructions in each box. Find the patterns on the stars. What comes next?



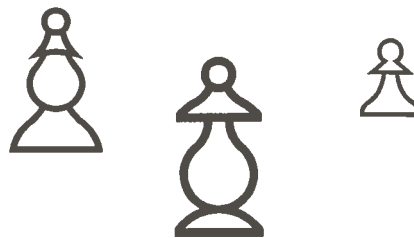
Color the larger piece



Color the smaller piece



Color the larger piece



Color the smaller piece

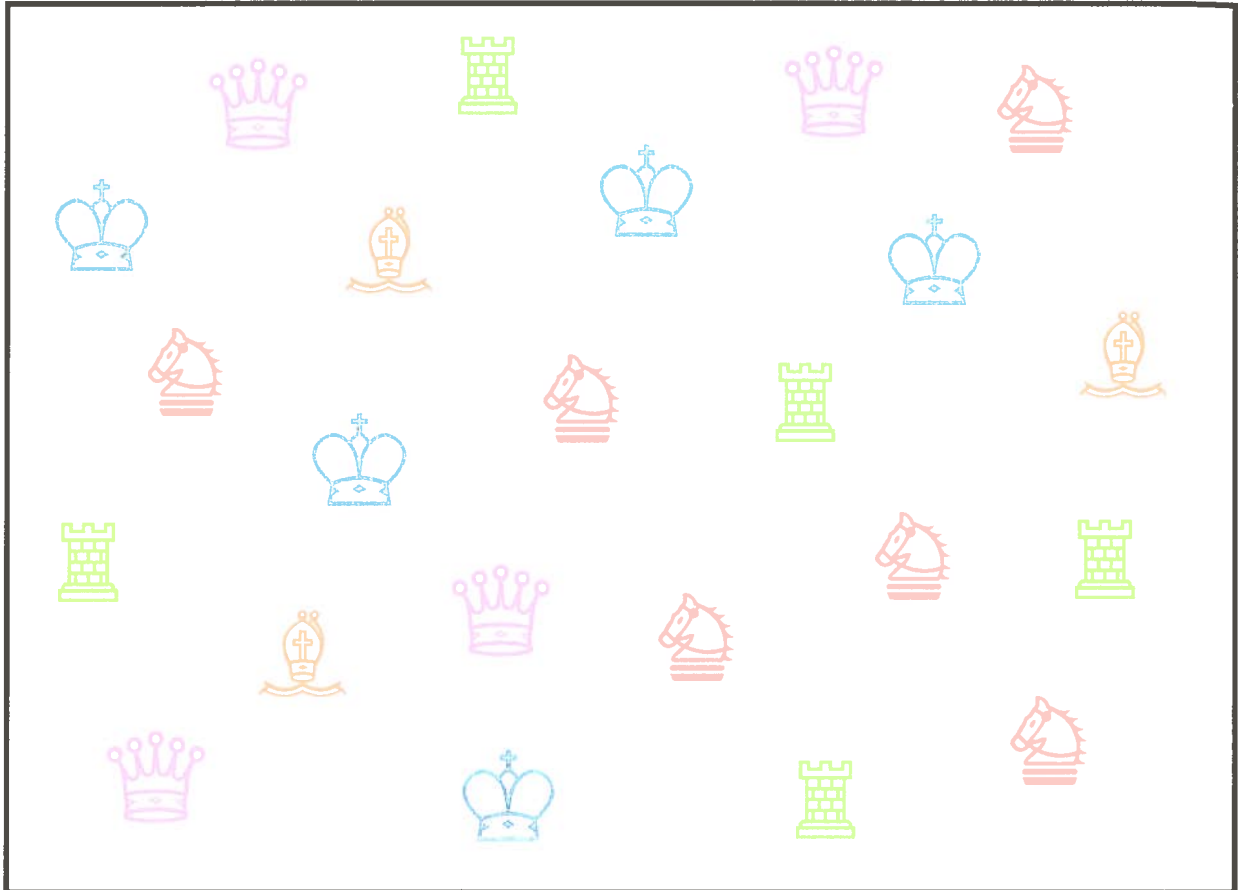
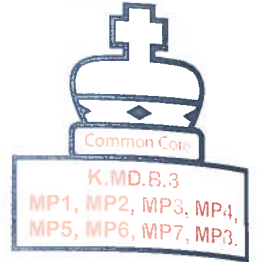


Classify objects and count the number of objects in each category.

Name _____

Lesson 5.4 Classifying Chess Pieces I

Study the pieces in the box. Then, follow the instructions, and answer the questions below.



1. Draw circles around the knights.
2. Draw squares around the kings.
3. Draw triangles around the bishops.
4. Draw rectangles around the rooks.
5. Cross out the queens.
6. How many knights are there?
7. How many kings are there?
8. How many pieces are there in all?

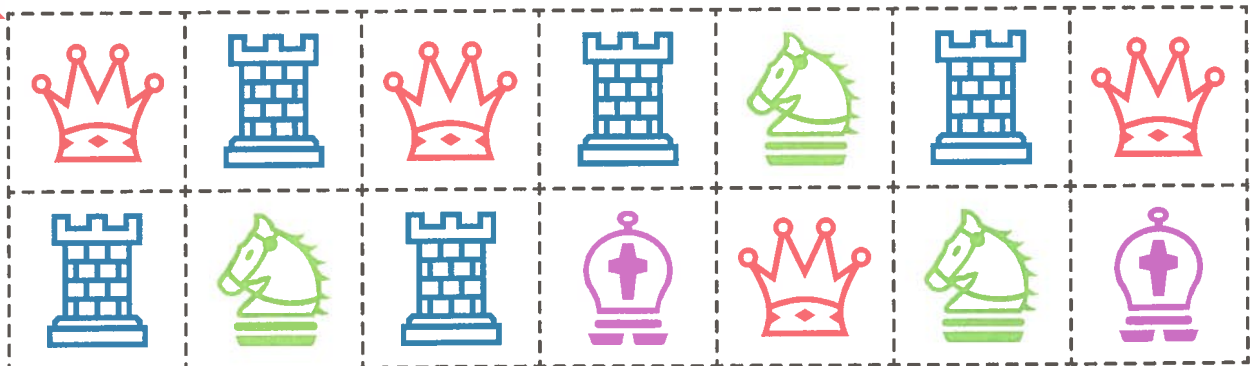
Name _____

Classifying Chess Pieces II



Cut out the chess pieces. Arrange the pieces in their respective columns. Which piece has the most? Which piece has the least?





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Name _____















Classifying Pieces by Color



Cut out the chess pieces. Arrange each piece by color in the respective column. Which color has the most pieces and which one has the least?

Blue	Red	Green



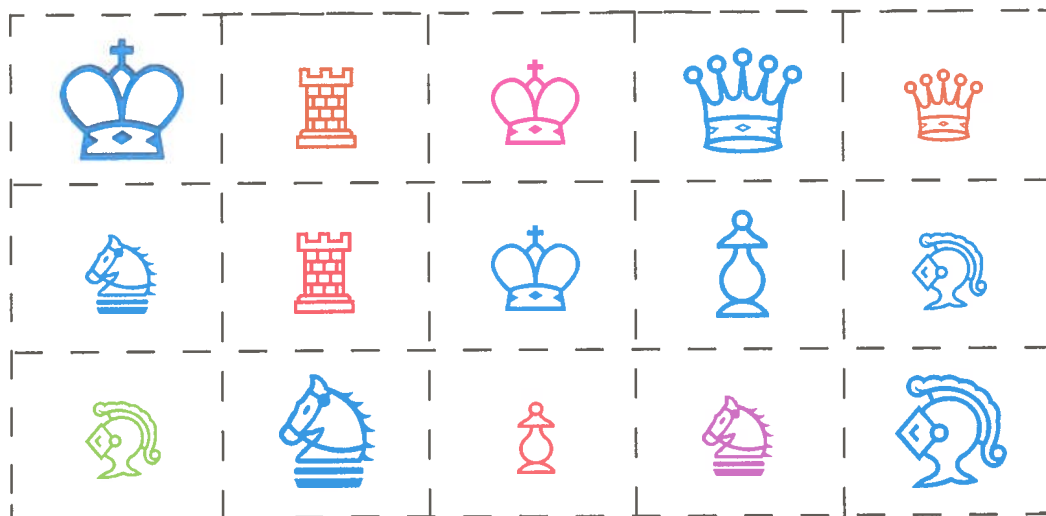
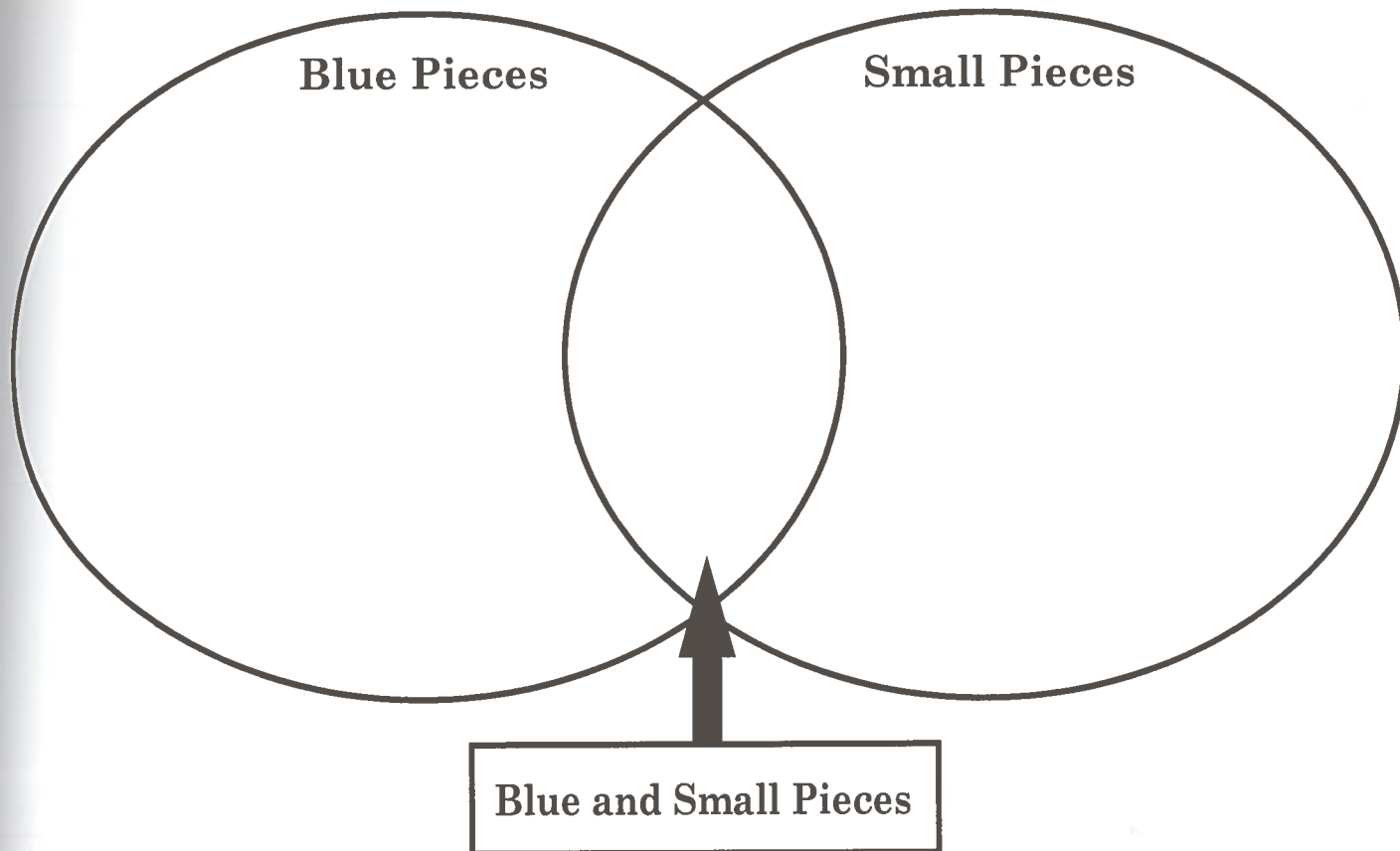
						
						

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Name _____

Lesson 5.5 Venn Diagram I

Cut out and glue the chess pieces and place them in the Venn diagram.

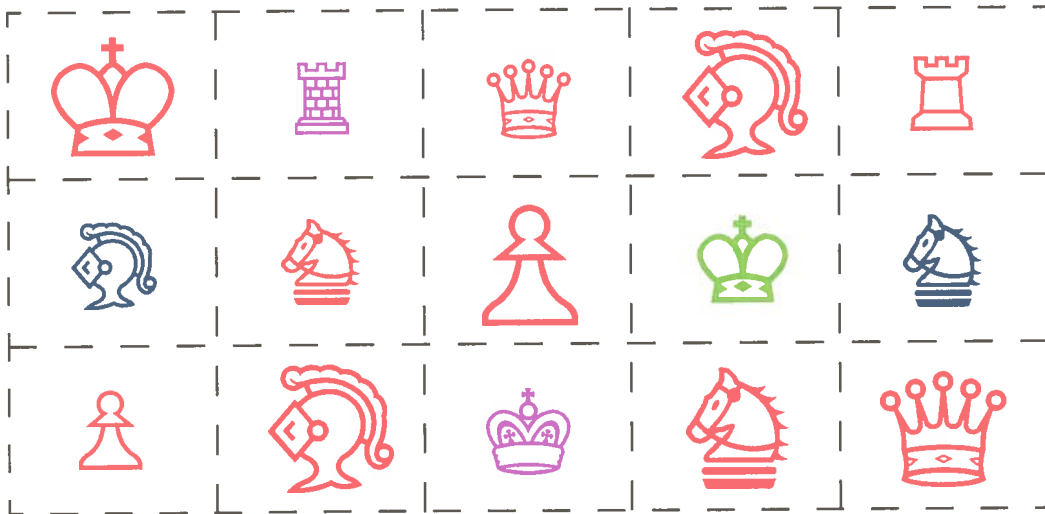
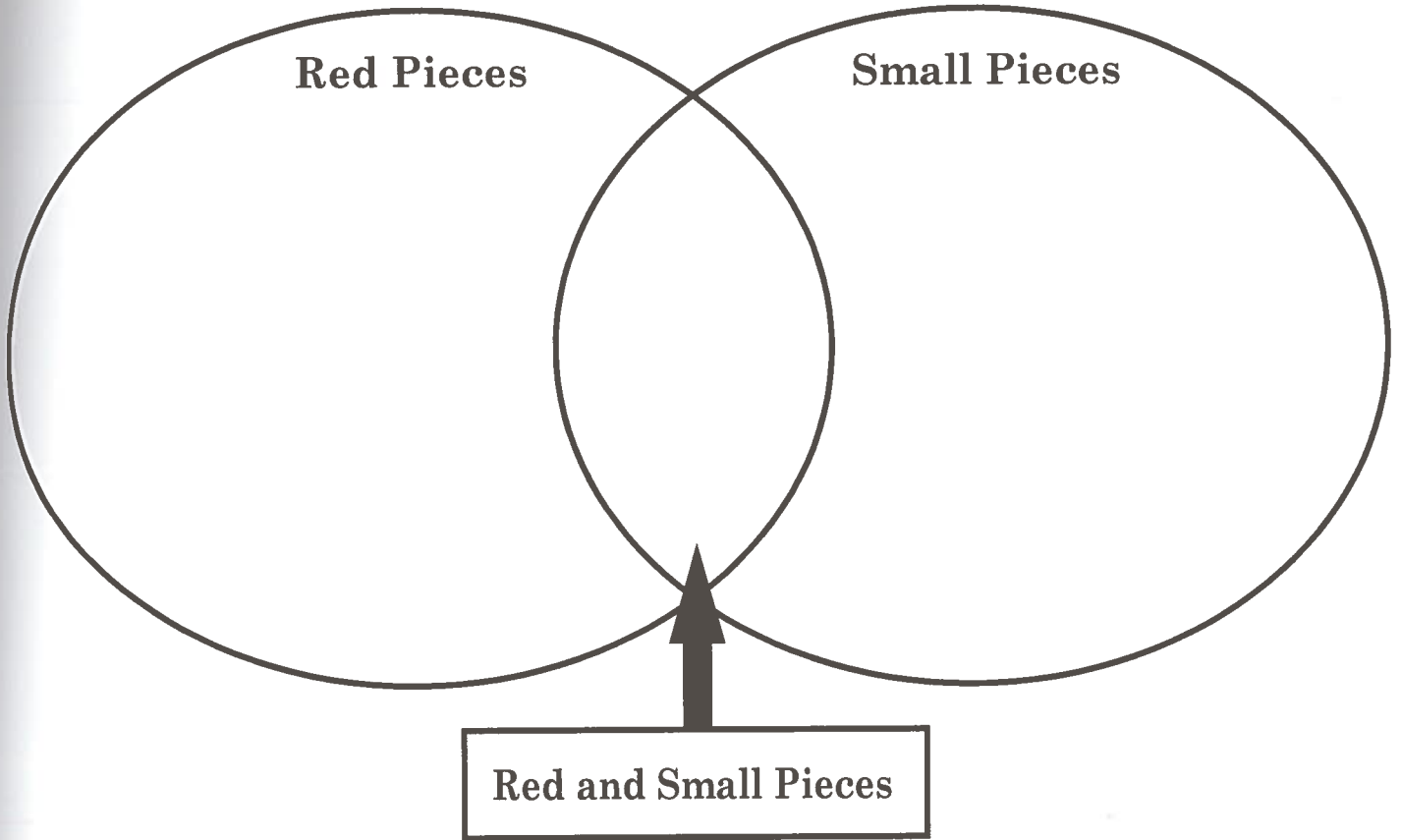


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Name _____

Venn Diagram II

Cut out and glue the chess pieces and place them in the Venn diagram.

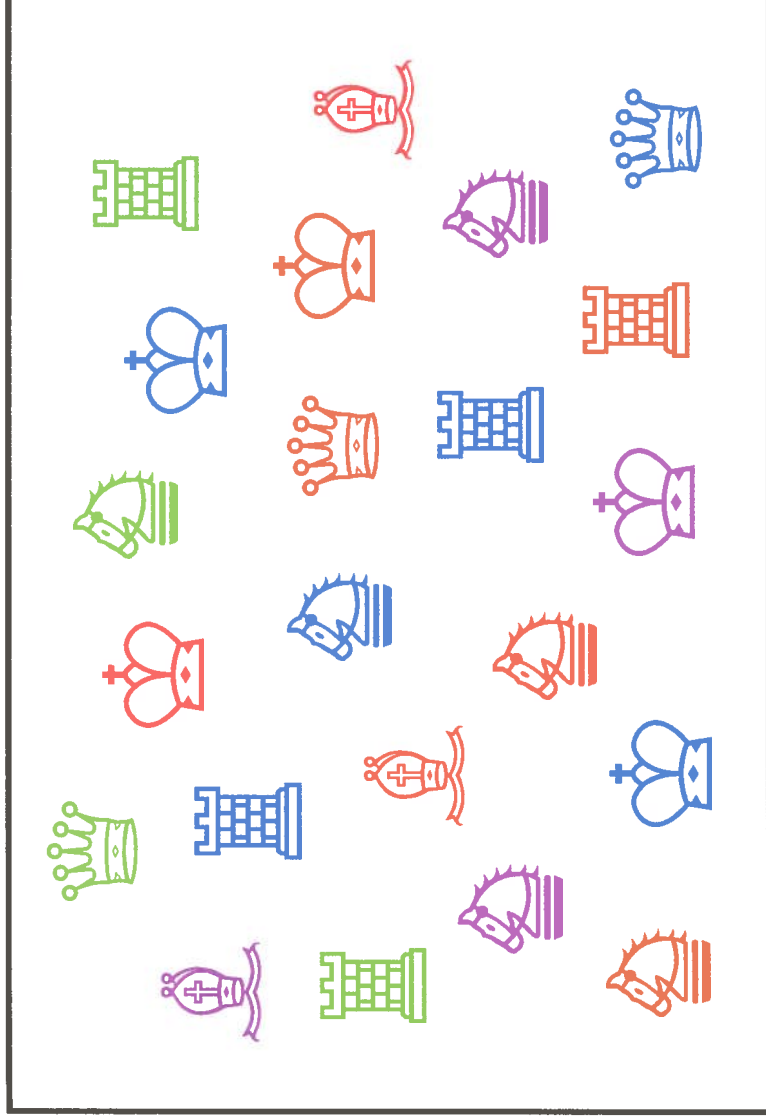


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Name _____

Lesson 5.6 Counting Pieces

study the pieces in the box. Then answer the questions below.



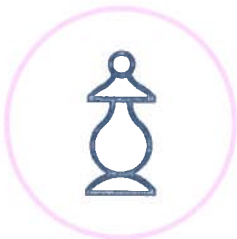
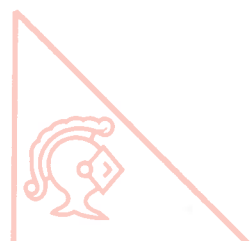
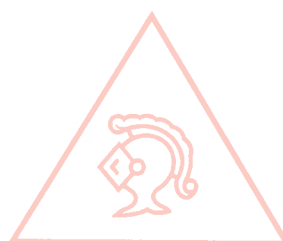
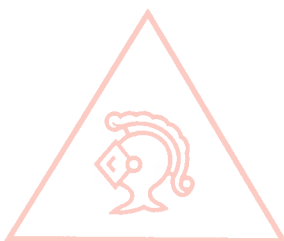
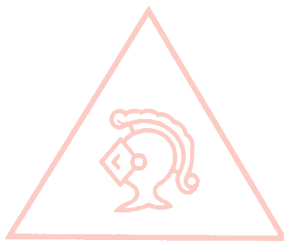
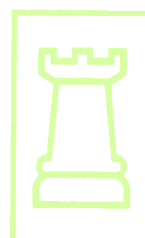
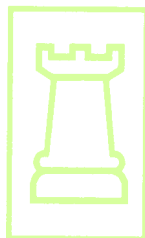
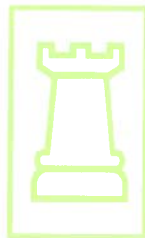
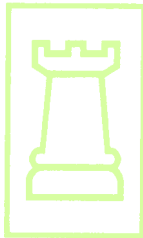
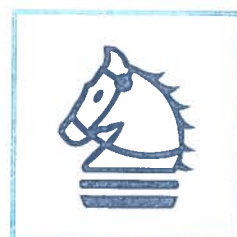
1. How many blue pieces are there?
2. How many purple pieces are there?
3. How many kings are there?
4. How many bishops are there?
5. How many red bishops are there?
6. How many rooks are there?
7. How many total pieces are there?

Name _____

Seeking Differences



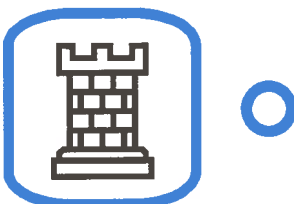
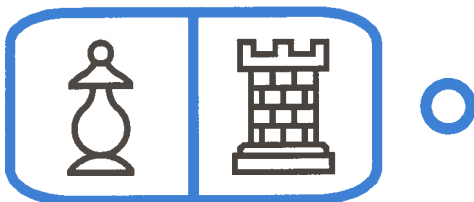
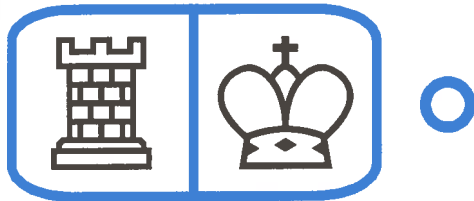
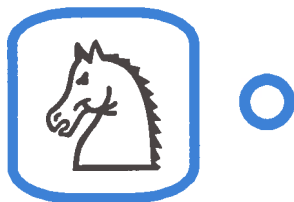
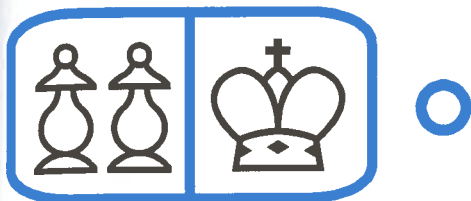
Look at the chess pieces inside shapes in each row. Then circle the one that is different from the others. What differences do you see?



Name _____

Lesson 5.7 Money Matching

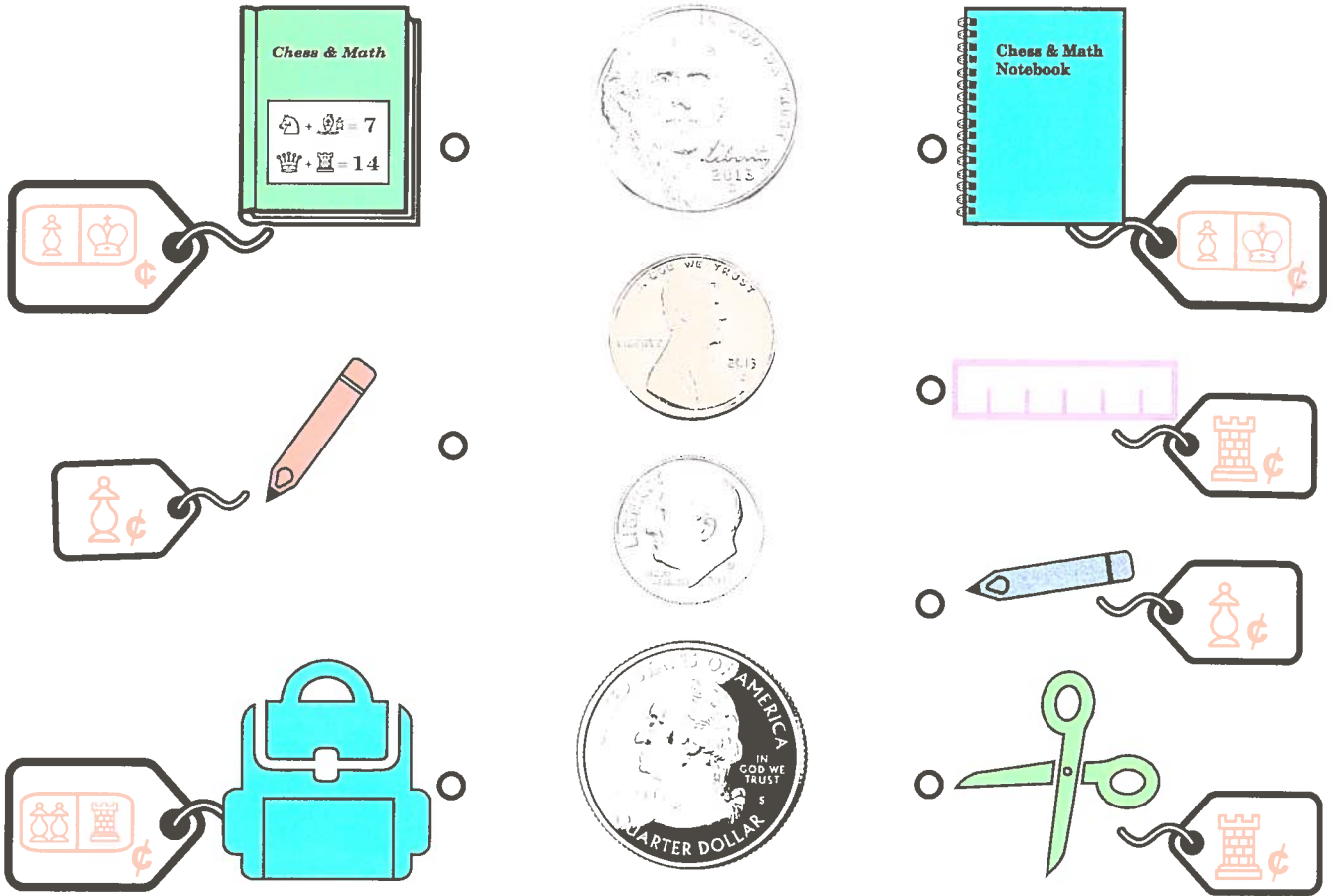
Trace a line to match the chess pieces with their equivalent money amount.



Name _____

Shopping School Supplies

Draw a line to match the price of every object with the coins.



WORD PROBLEM

Michael had one quarter, one dime, one nickel, and five pennies. Does he have enough money to buy a backpack, a pair of scissors, two notebooks, and one pencil? If not, how much more money does he need to complete his shopping? Use the chart below to record your analysis.

Michael's Money	Supplies

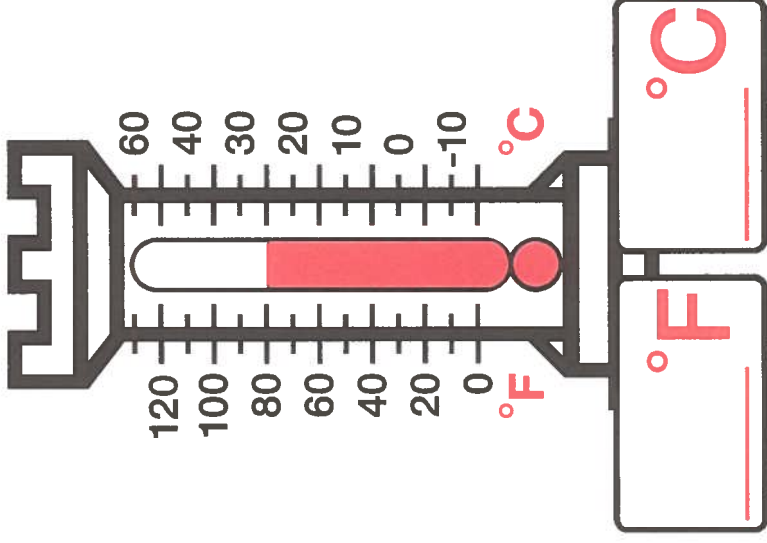
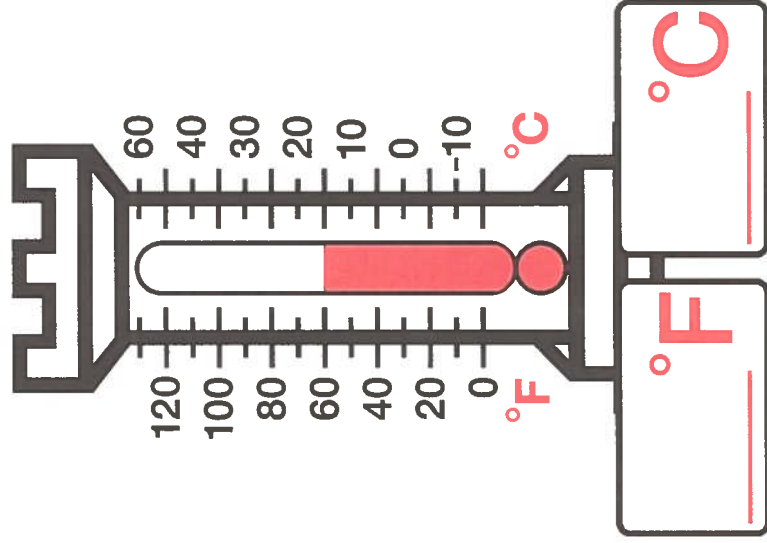
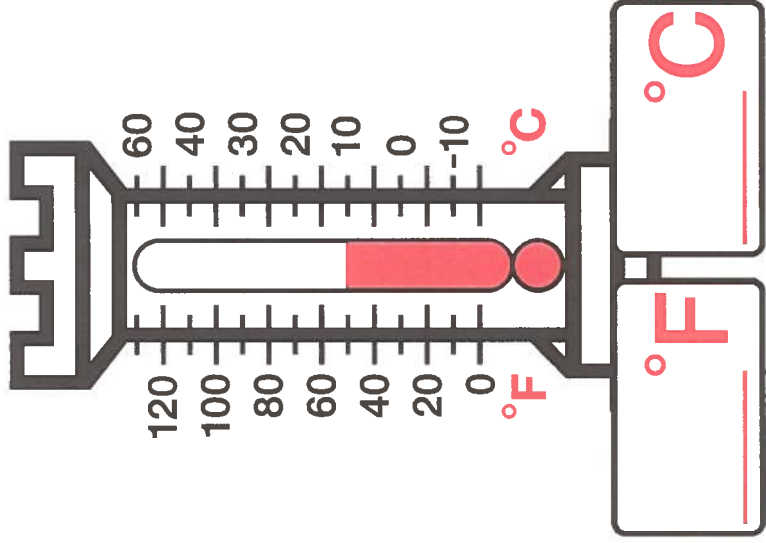
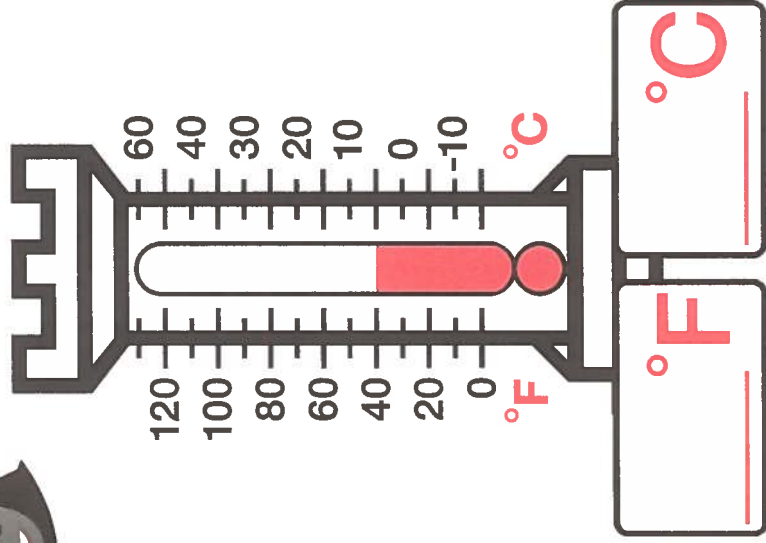
Name _____

Lesson 5.8 Measuring the Temperature

Write the temperature for each thermometer in Fahrenheit and Celsius.

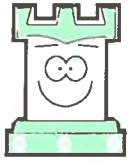


Do you have enough money to buy all these items? If not, how much more money do you need for your analysis.



Name _____

Color the Temperature



Color and write the temperature that indicates the chess domino for each thermometer in Fahrenheit and Celsius.


°F °C

°F °C

°F °C

°F °C



level 
COMPLETED!

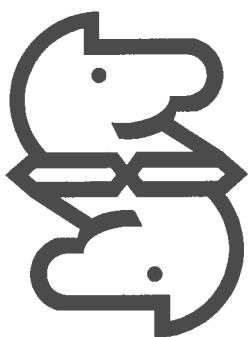
I can describe and compare measurable attributes using the chess ruler.

I can classify objects and count the number of objects in categories.

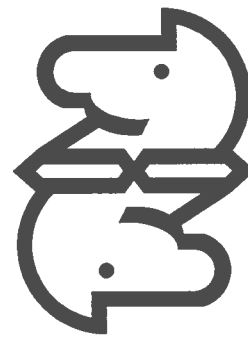
I can use coins to solve mathematical problems.

I can measure the temperature in Fahrenheit and Celsius.


I know how to move the chess bishop.



CHess & MATH





level 
COMPLETED!

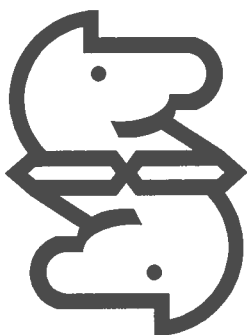
I can describe and compare measurable attributes using the chess ruler.

I can classify objects and count the number of objects in categories.

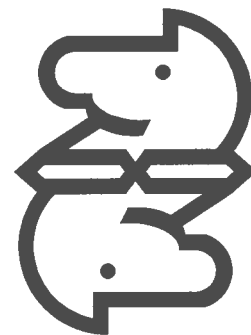
I can use coins to solve mathematical problems.

I can measure the temperature in Fahrenheit and Celsius.

I know how to move the chess bishop.



CHess & MATH

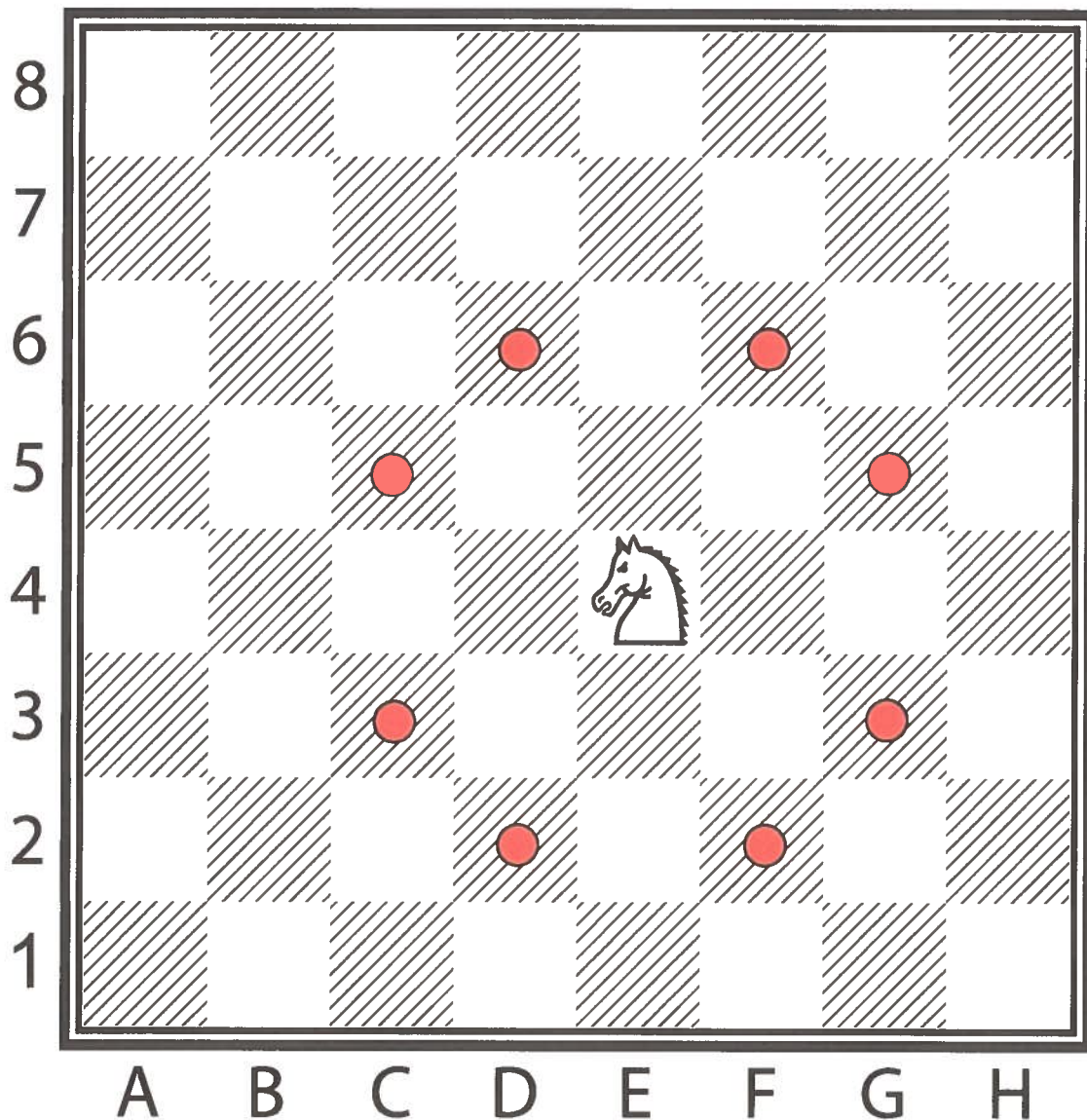




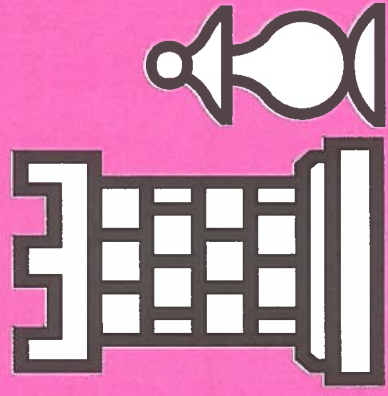
THE KNIGHT

Hi friends!

I am the Knight, and I move two squares in one direction and one on the side, like an L shape. I am the only piece that can jump over the rest of the pieces. My numerical value is 3.

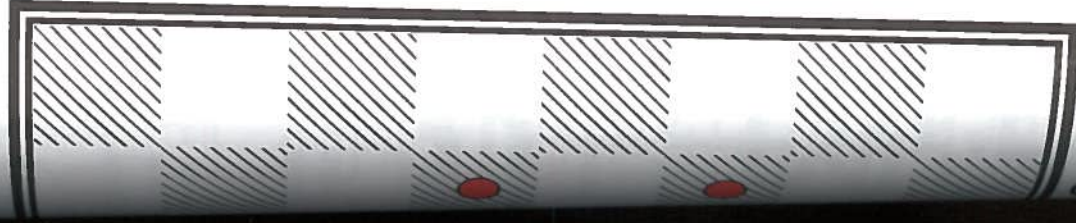


CHAPTER

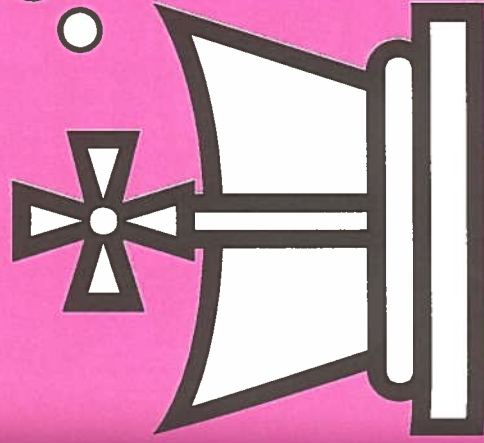
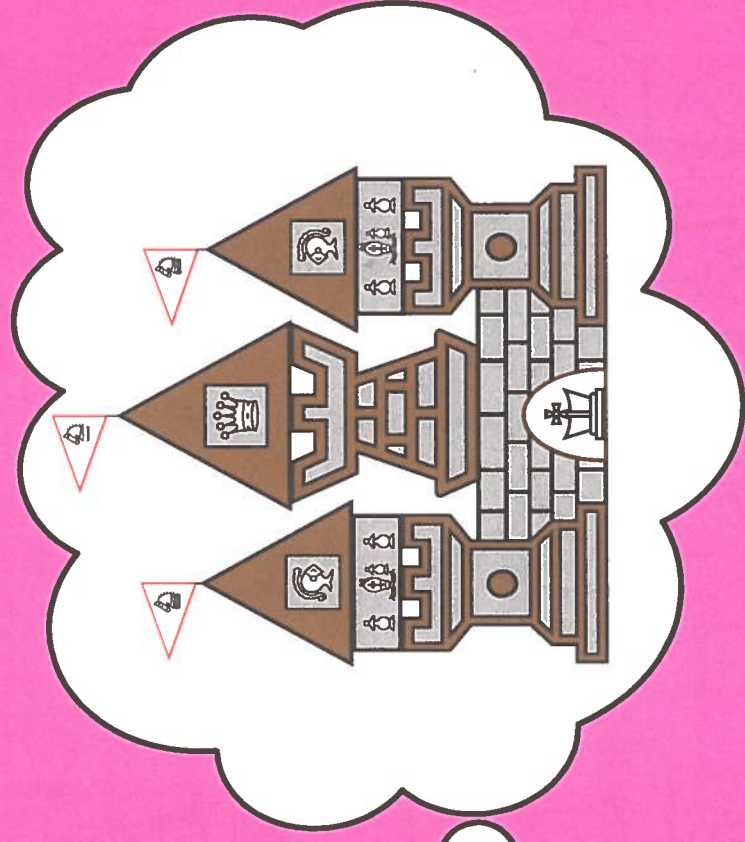


GEOMETRY

done on the side, like an
pieces. My numerical



H



Identify and describe shapes.

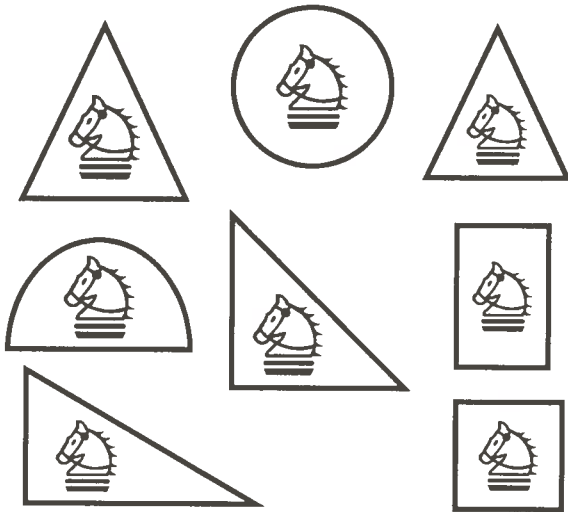
Name _____

Lesson 6.1 Identify Shapes & Pieces

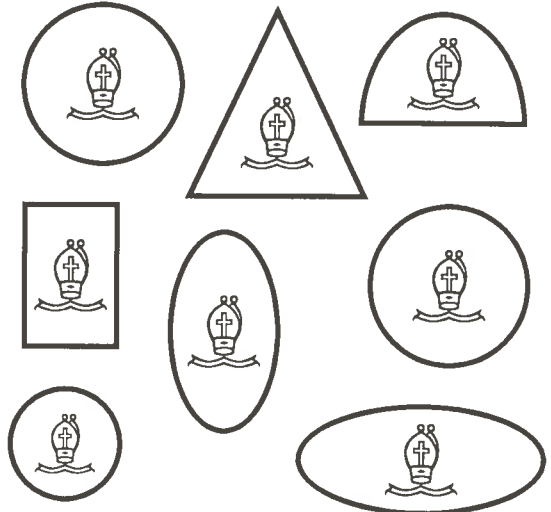


Identify and color the pieces below according to the instructions for each group.

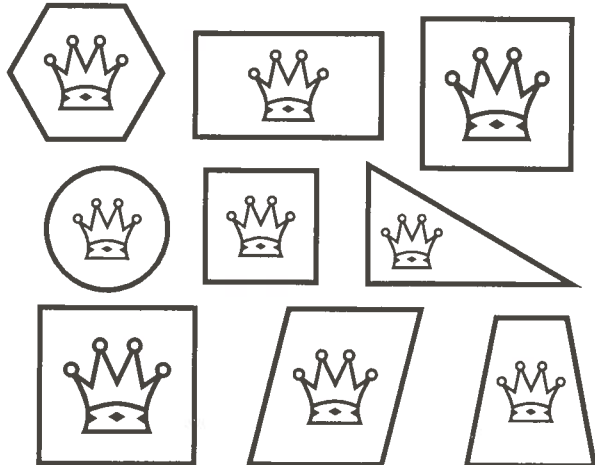
Color the triangle knights red



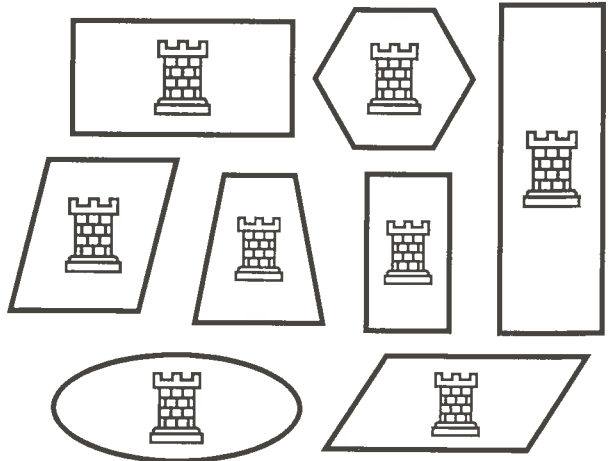
Color the circle bishops blue



Color the square queens green



Color the rectangle rooks purple

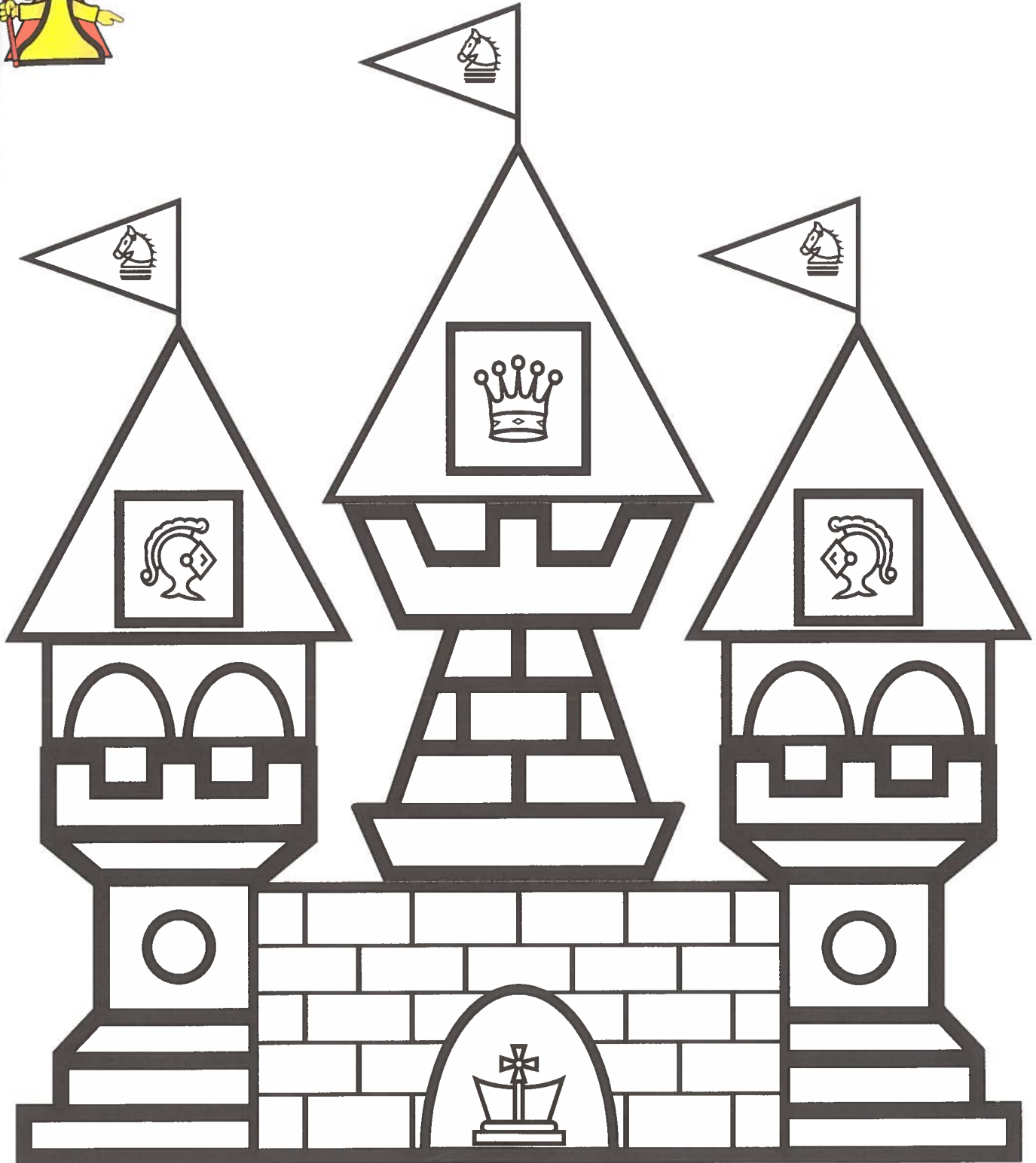


Name _____

Castle Kingside

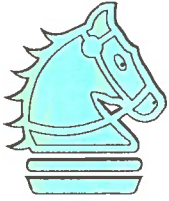


Look at the king's castle and identify squares, triangles, rectangles, circles and semicircles. Use one color for each type of shape to color the castle.

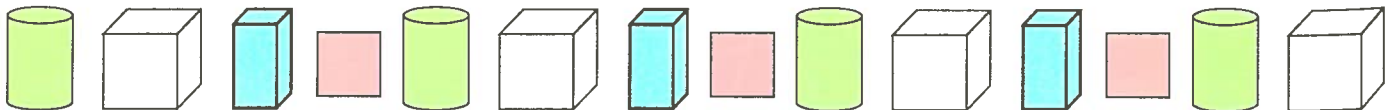
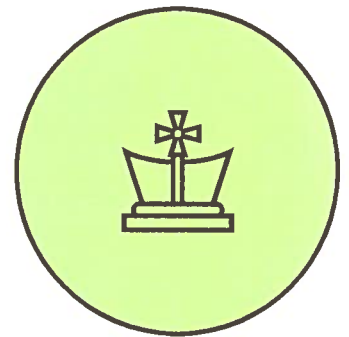
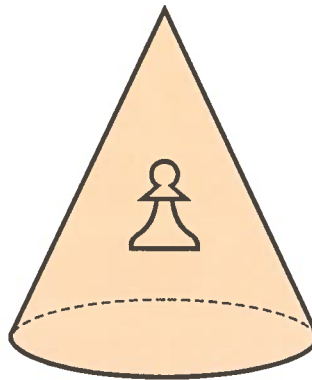
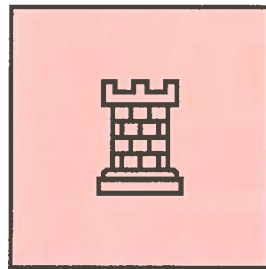
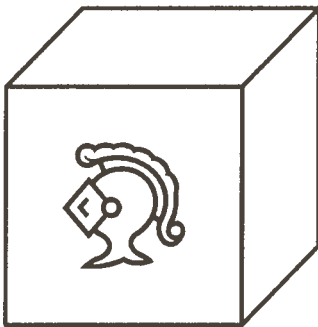
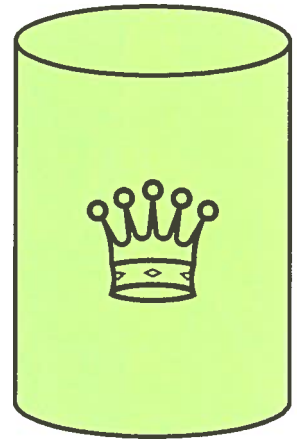
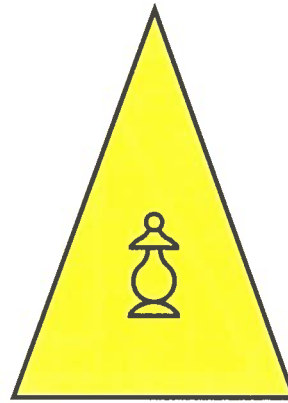
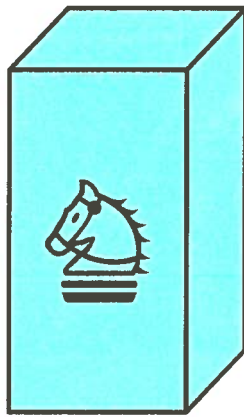
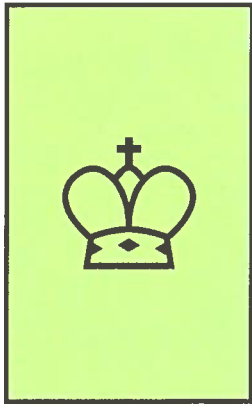


Name _____

Lesson 6.2 Flat and Solid Shapes



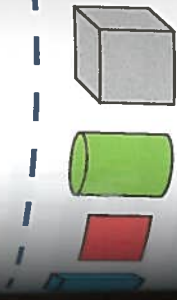
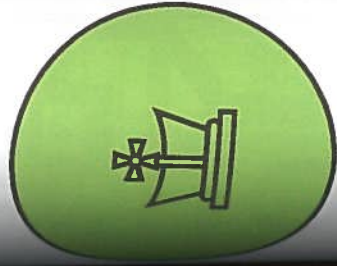
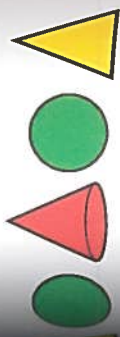
Identify the following shapes. Circle the pieces inside the “flat” shapes and cross out the pieces inside the “solid” shapes. Find the patterns on the top and bottom rows of shapes, and talk with the class about it.



Name _____

Where Am I? Above, Below, In Front of, Behind

the "flat" shapes and cross
forms on the top and bottom



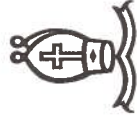
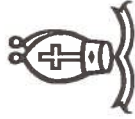
Look at the pieces and shapes below. Depending on the instruction for each case, circle one piece.



Above



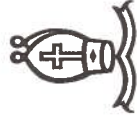
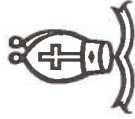
Below



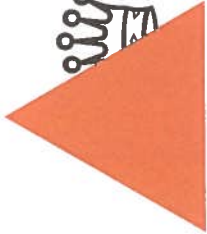
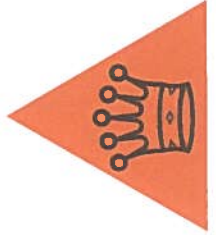
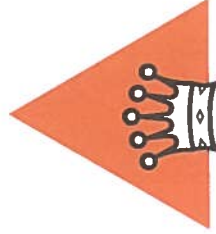
Above



Below



In front of



Behind



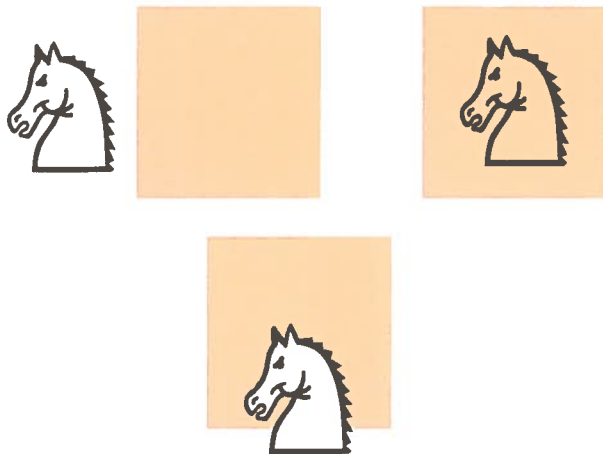
Name _____

Where Am I? Beside, Between, Over, On

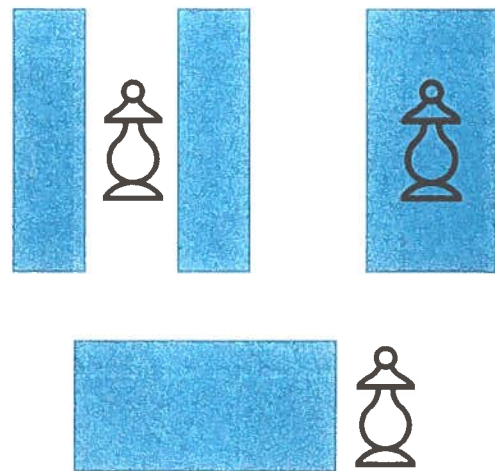


Look at the pieces and shapes below. Depending on the instruction for each case, circle one piece.

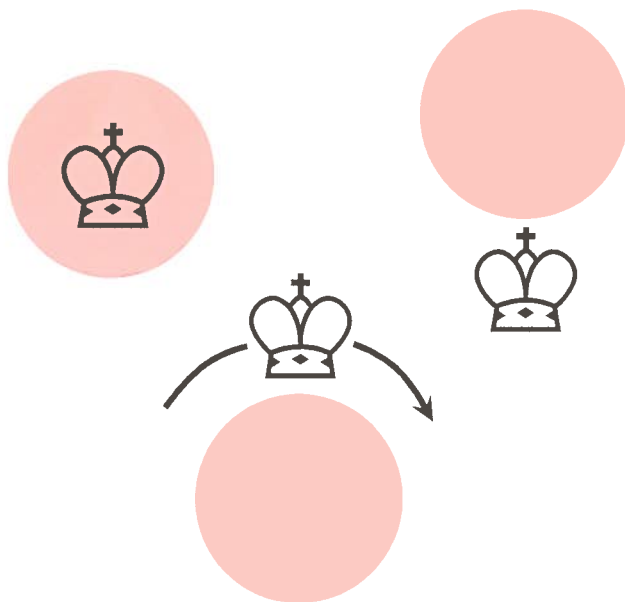
Beside



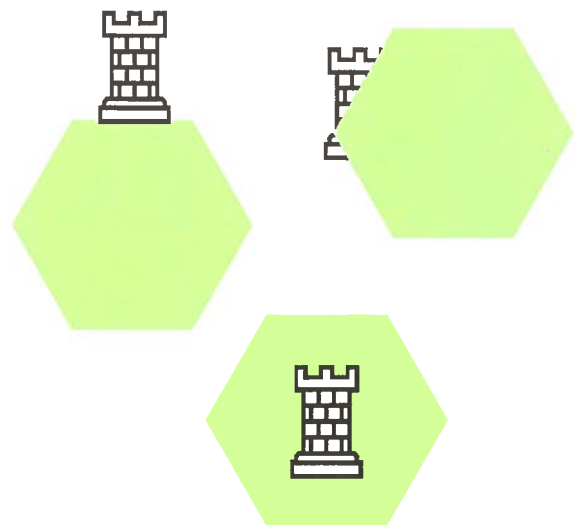
Between



Over



On

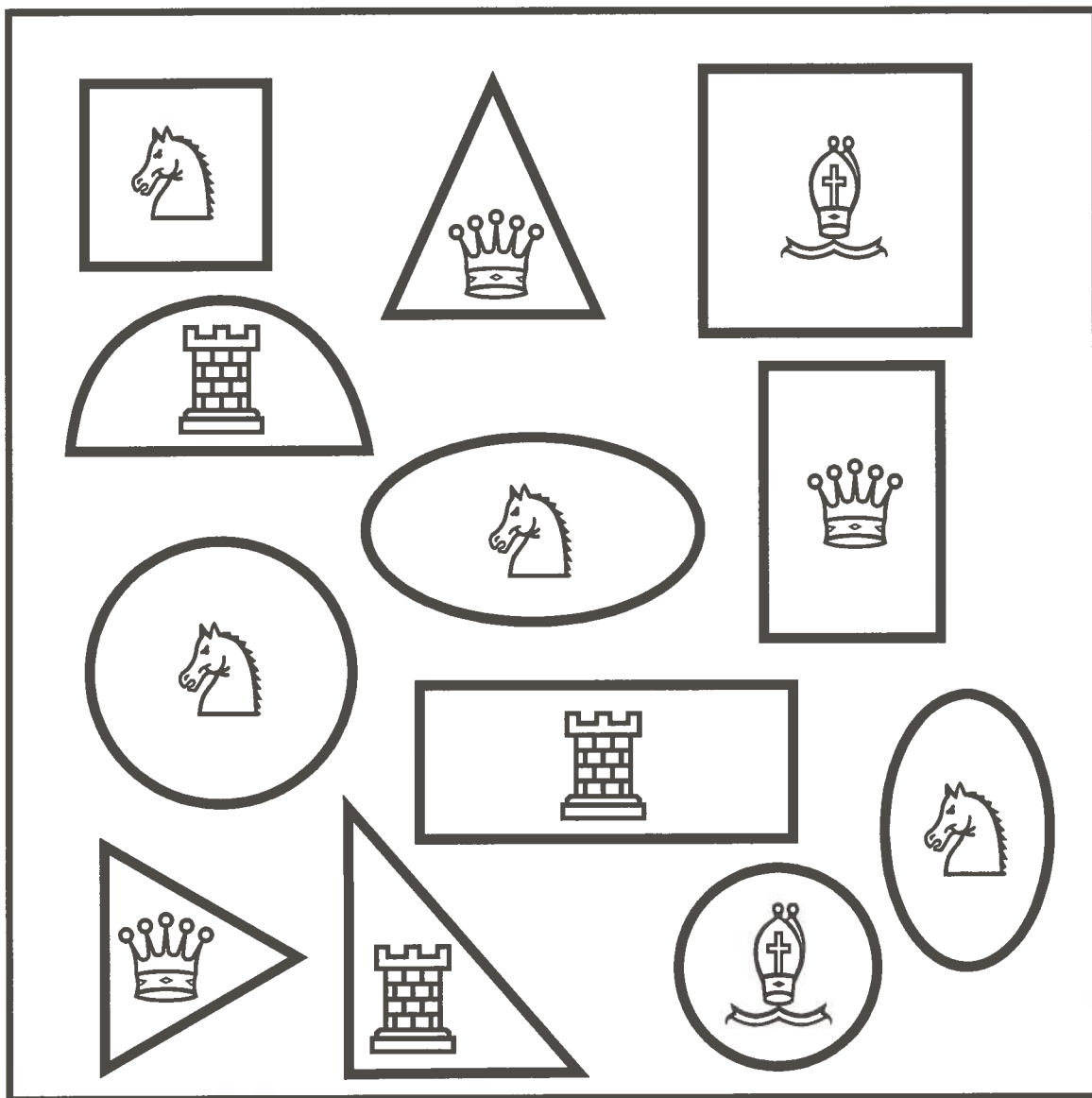


Name _____

Lesson 6.3 Recognizing Shapes & Pieces



Look at the shapes and pieces below, and color them according to the instructions below.


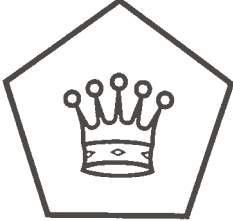
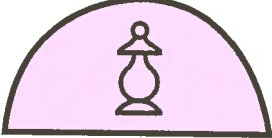



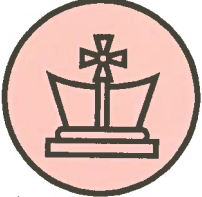

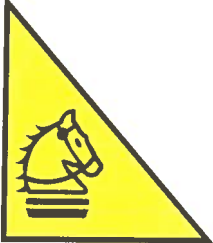

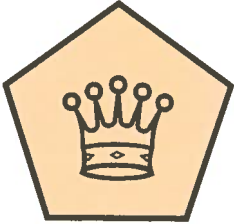


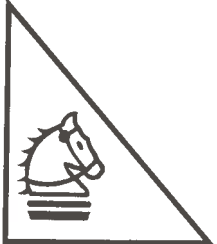




1. Color the triangle queen red.
2. Color the rectangle queen blue.
3. Color the oval knight pink.
4. Color the square knight green.
5. Color the circle knight orange.
6. Color the square bishop purple.
7. Color the circle bishop grey.
8. Color the triangle rook yellow.
9. Color the rectangle rook brown.
10. Color the semicircle rook black.

Name _____

Matching Shapes

Draw a line to match a shape from the left side of the page to one on the right side.
Color matching shapes the same color.

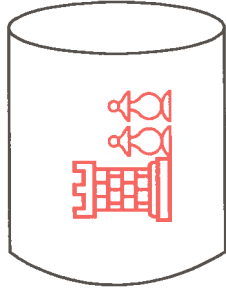
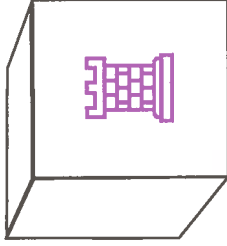
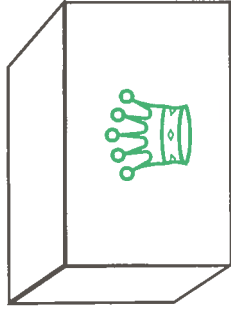
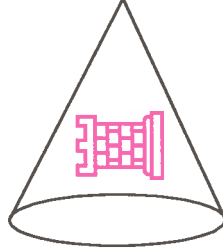
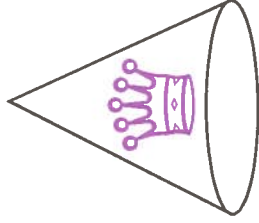
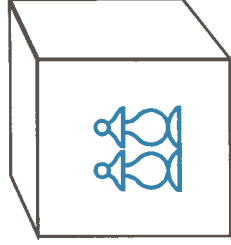
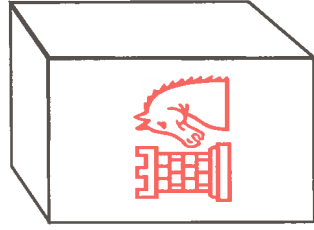
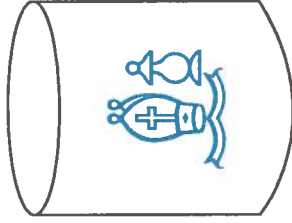
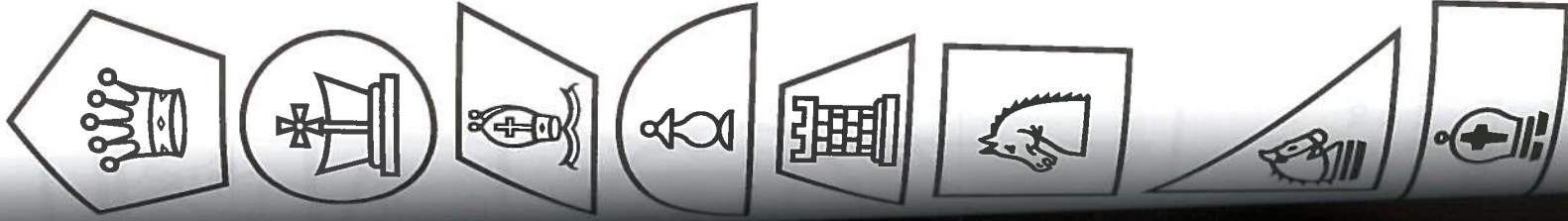
Name _____

Identify and Add Shapes

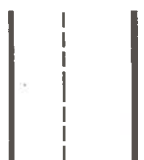
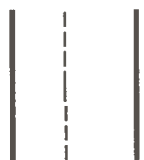
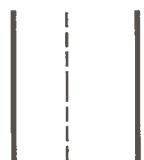
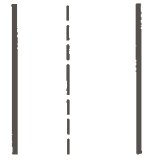
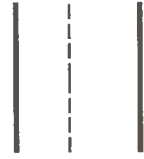
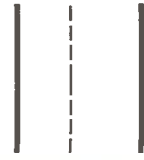
the right side.



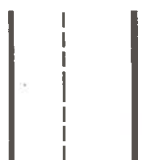
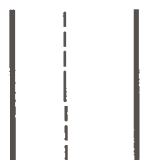
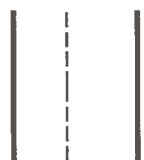
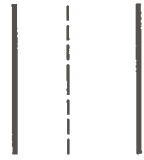
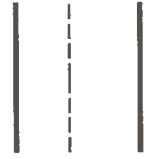
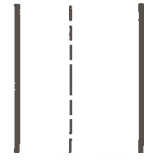
Look at the pieces and shapes below and identify cones, cubes, cylinders and rectangular prisms. Create an addition problem adding the pieces inside for each matching shape.



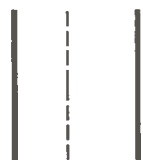
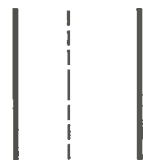
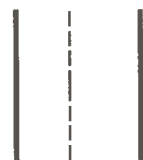
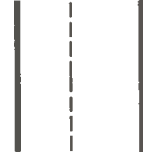
Rectangular Prism



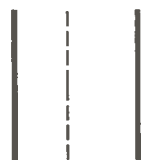
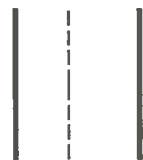
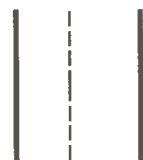
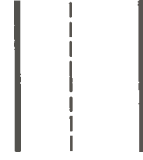
Cone



Cube

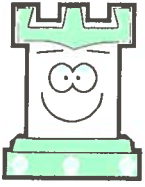


Cylinder

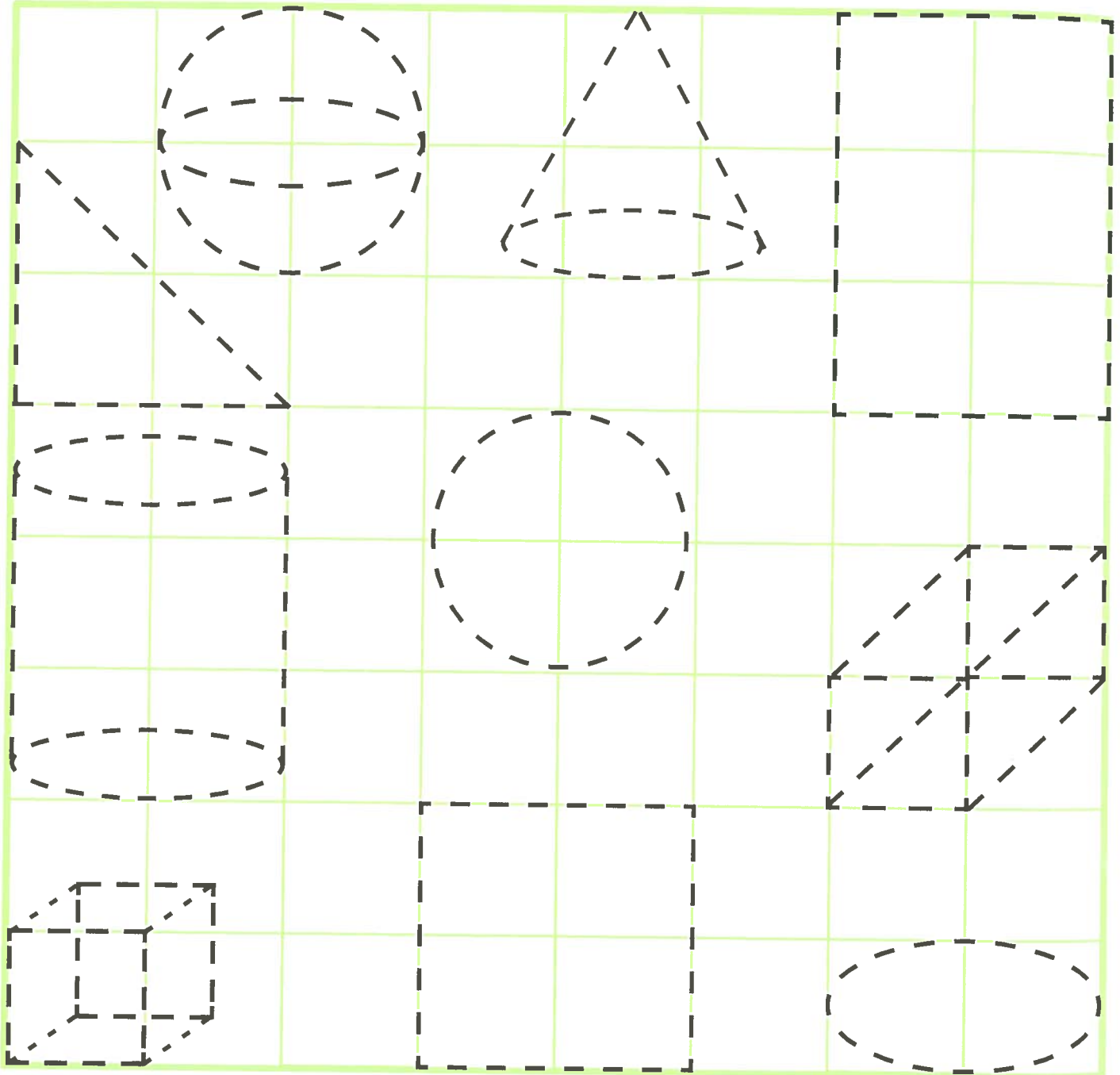


Name _____

Lesson 6.4 Geometry On the Chessboard



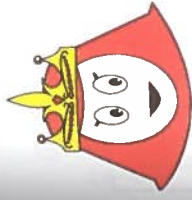
Identify and trace the shapes below.
Color the “flat shapes” red, and color the “solid shapes” blue.



Name _____

Making Shapes

Trace the dotted line, and complete the shapes that can be made.
Name the shapes.



8 7 6 5 4 3 2 1

a b c d e f g h

Analyze, compare, and compose shapes.


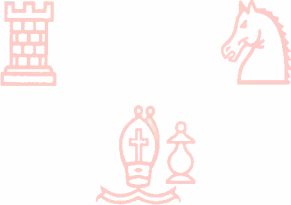
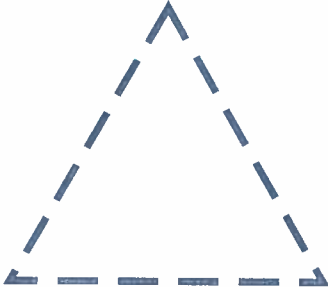
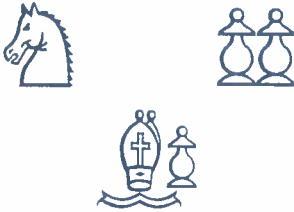
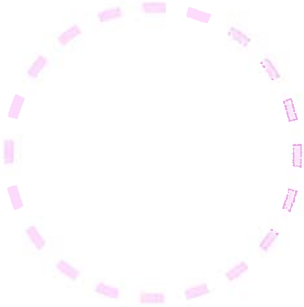


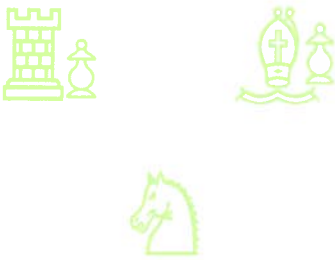

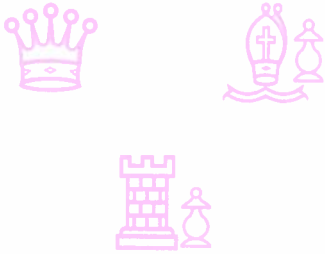
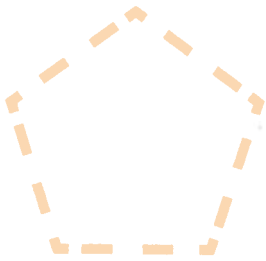
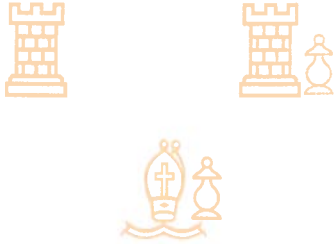
Name _____

Lesson 6.5 Sides and Vertices

Trace the shapes below. Then, circle the chess pieces that represent the number of sides and vertices. Look for the patterns.

Common Core:
 K.G.B.4, K.G.B.5, K.G.B.6
 MP1, MP2, MP3, MP4, MP5,
 MP6, MP7, MP8.





Name _____

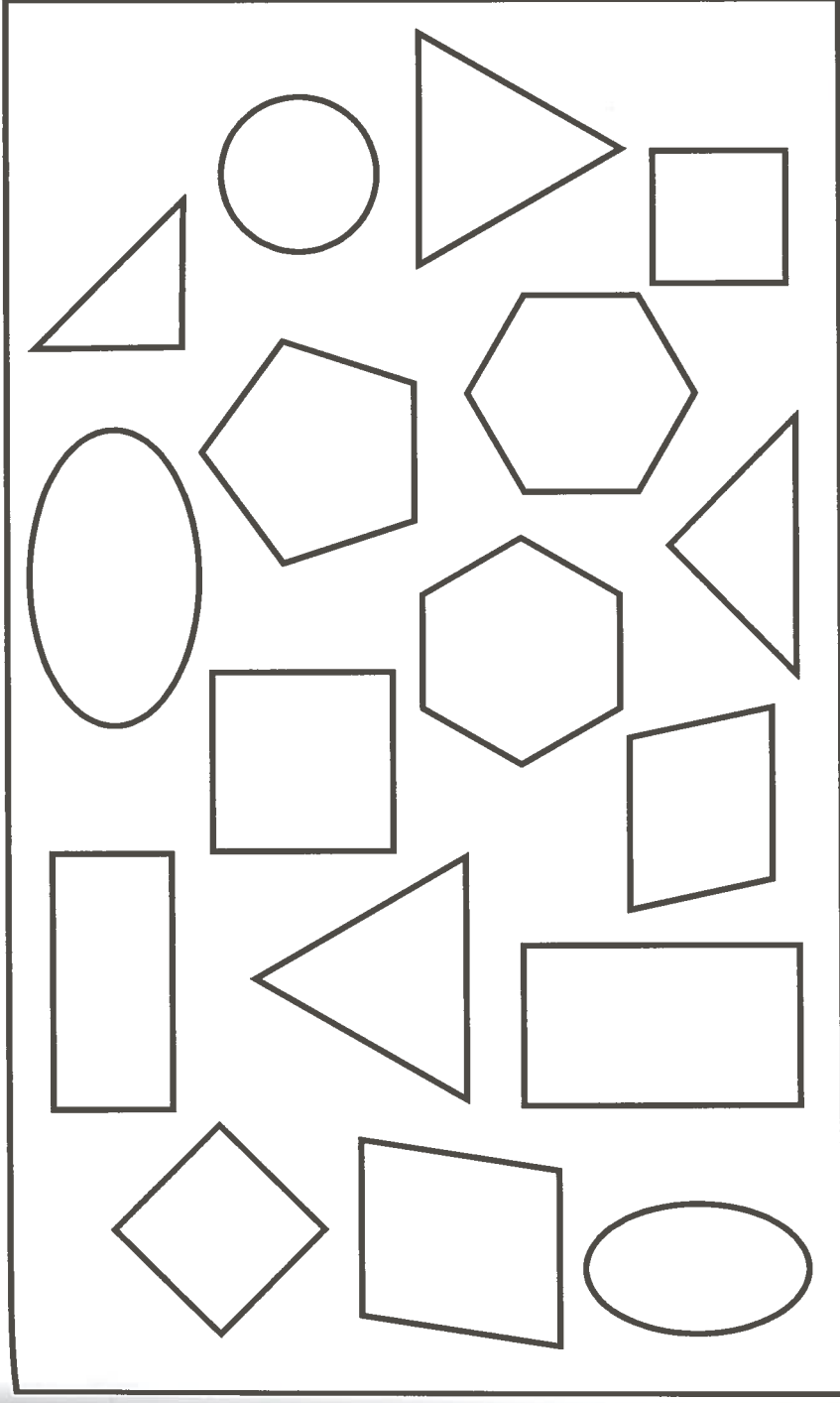
Identify and Color Shapes

Identify the shapes below, and follow the directions at the bottom of the page.



Common Core

K.G.B.4, K.G.B.5, K.G.B.6
MP1, MP2, MP3, MP4, MP5,
MP6, MP7, MP8.



Color the shapes with  sides blue.

Color the shapes with  sides green.

Color the shapes with  sides red.

Color the shapes with  sides purple.

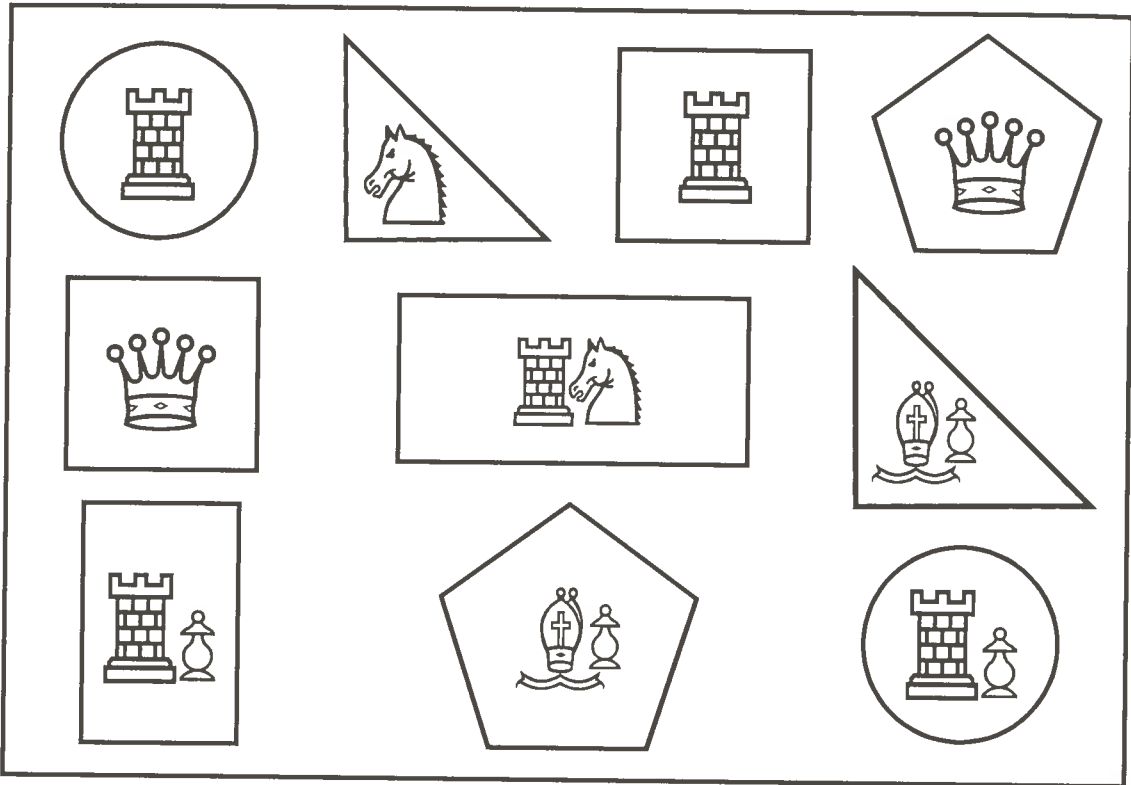
Color the shapes with  sides yellow.

Name _____

Lesson 6.6 Adding & Subtracting Shapes



Find and color the pair of shapes in the following picture. Then, use addition or subtraction with the chess pieces inside.



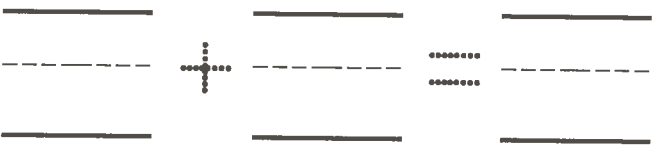
Circles



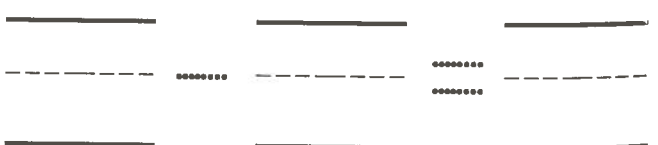
Squares



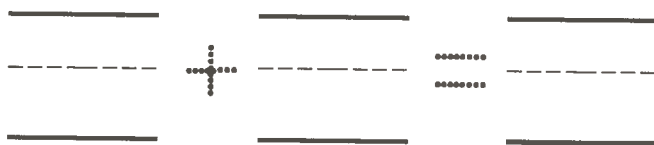
Rectangles



Triangles



Pentagons

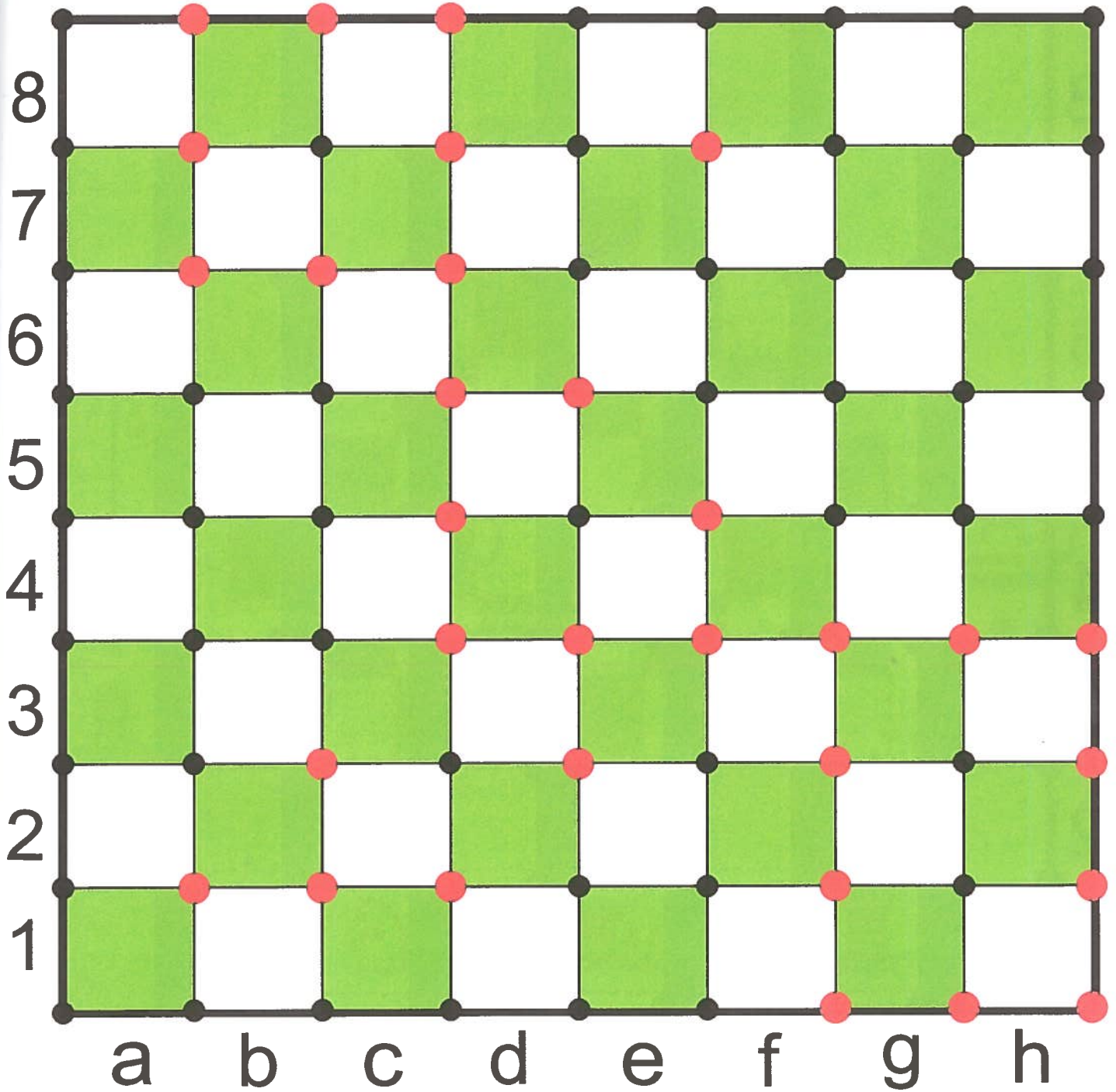


Name _____

Composing Shapes I

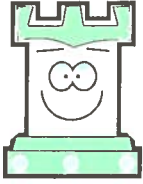


Trace straight lines to connect the red dots without touching the black dots.
Identify the shapes formed by the dots.

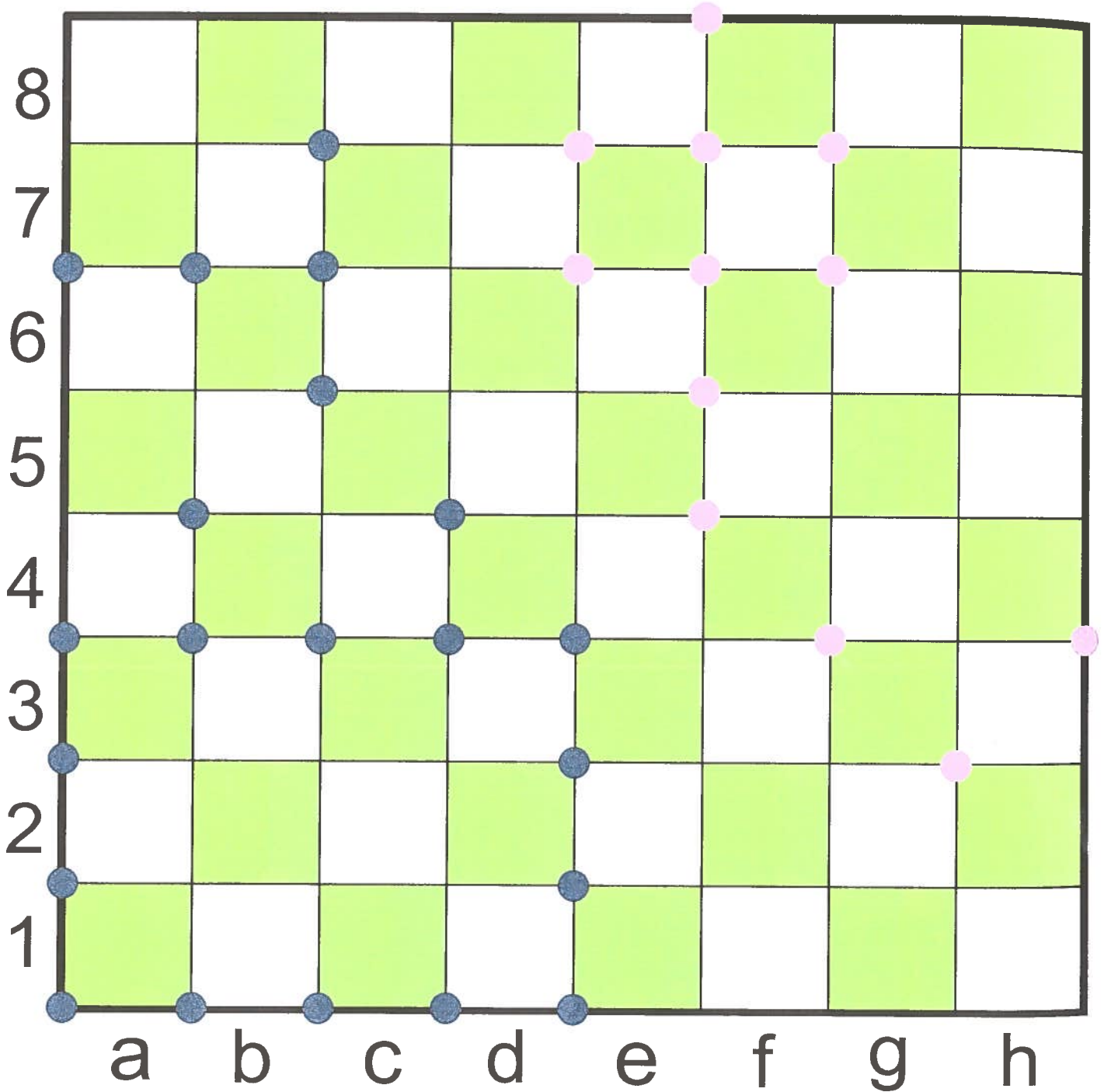


Name _____

Lesson 6.7 Composing Shapes II



Draw straight lines to connect the blue dots, and separately connect the purple dots. Identify the shapes and the picture behind them.



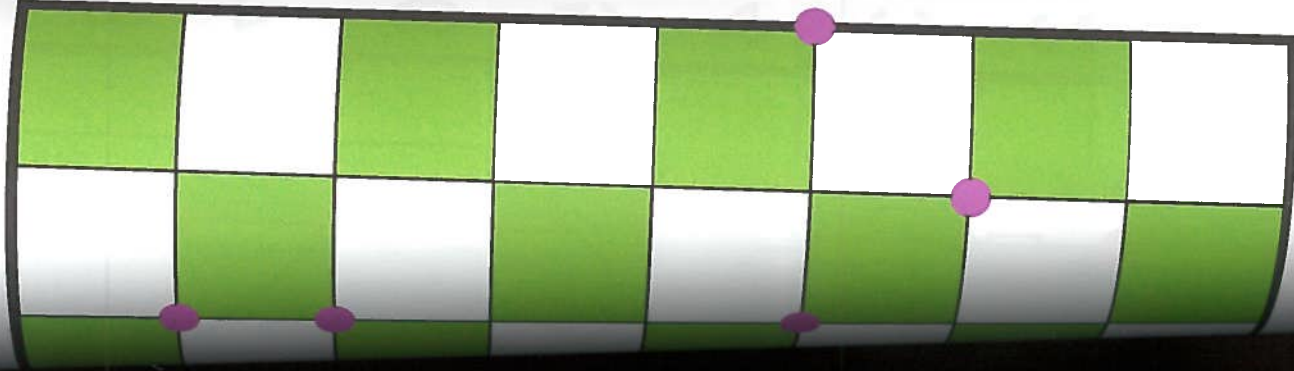
Name _____

Castle Queenside

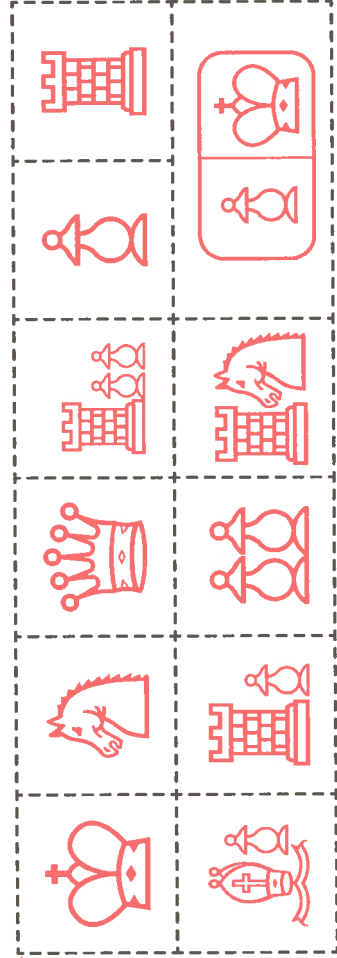
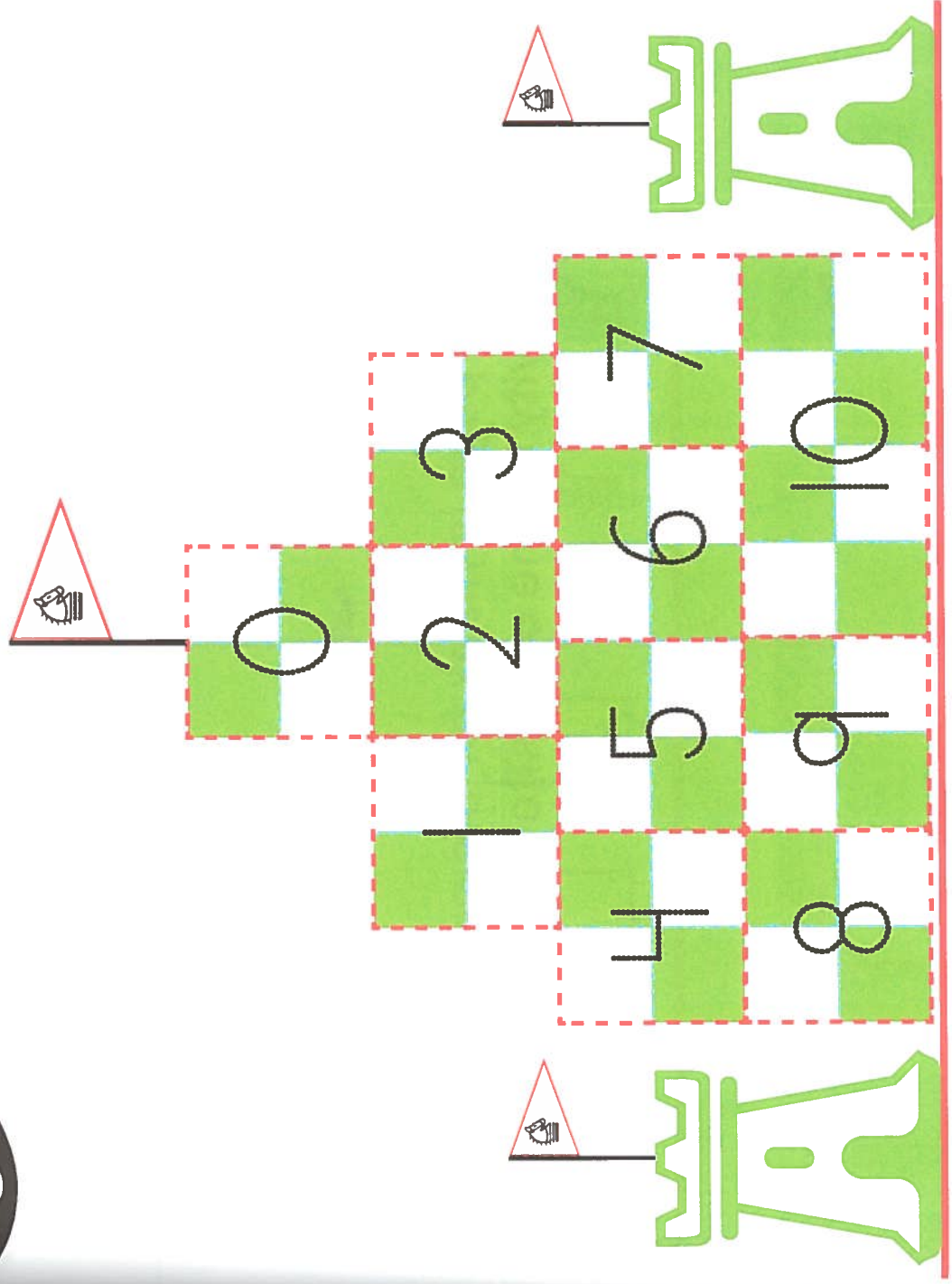
Separately connect the
dots and them.



Trace the queen's castle. Then, cut out and paste the chess pieces according to their numbers. What type of shapes can you see in the queen's castle?



g h

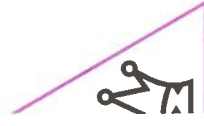
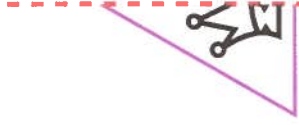
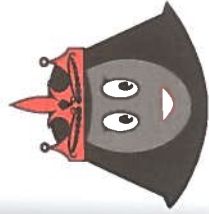


This page is blank for the cutting activity on the opposite side.

Name _____

Lesson 6.8 Completing Shapes

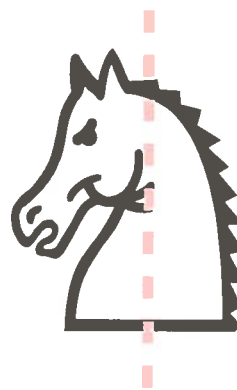
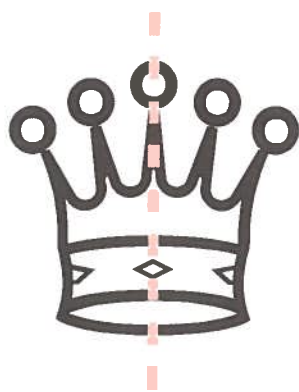
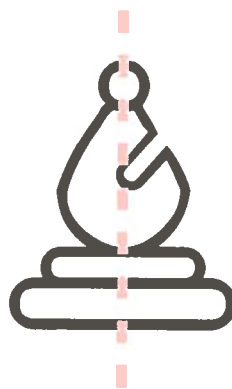
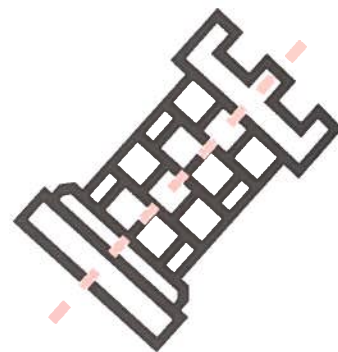
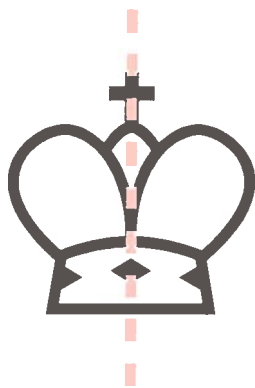
Circle the half that completes the picture. Pay close attention to the shape and the chess piece inside.




Name _____

Symmetrical Shapes

Look at the pieces below. Circle the pieces that have symmetry.





level 
COMPLETED!

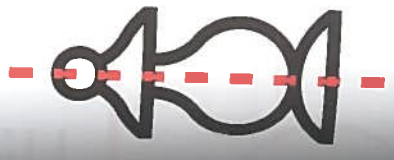
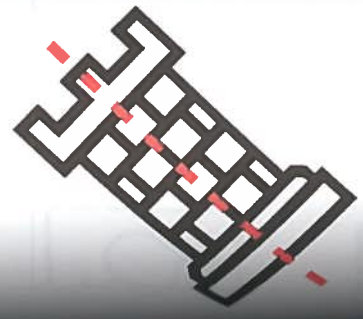
I can identify and describe shapes.

I can analyze, compare, create, and compose shapes using the chessboard.

I can recognize symmetric shapes with chess pieces.

I can recognize the location of objects using: above, below, in front of, behind, beside, between, over and on.

I know how to move the chess knight.

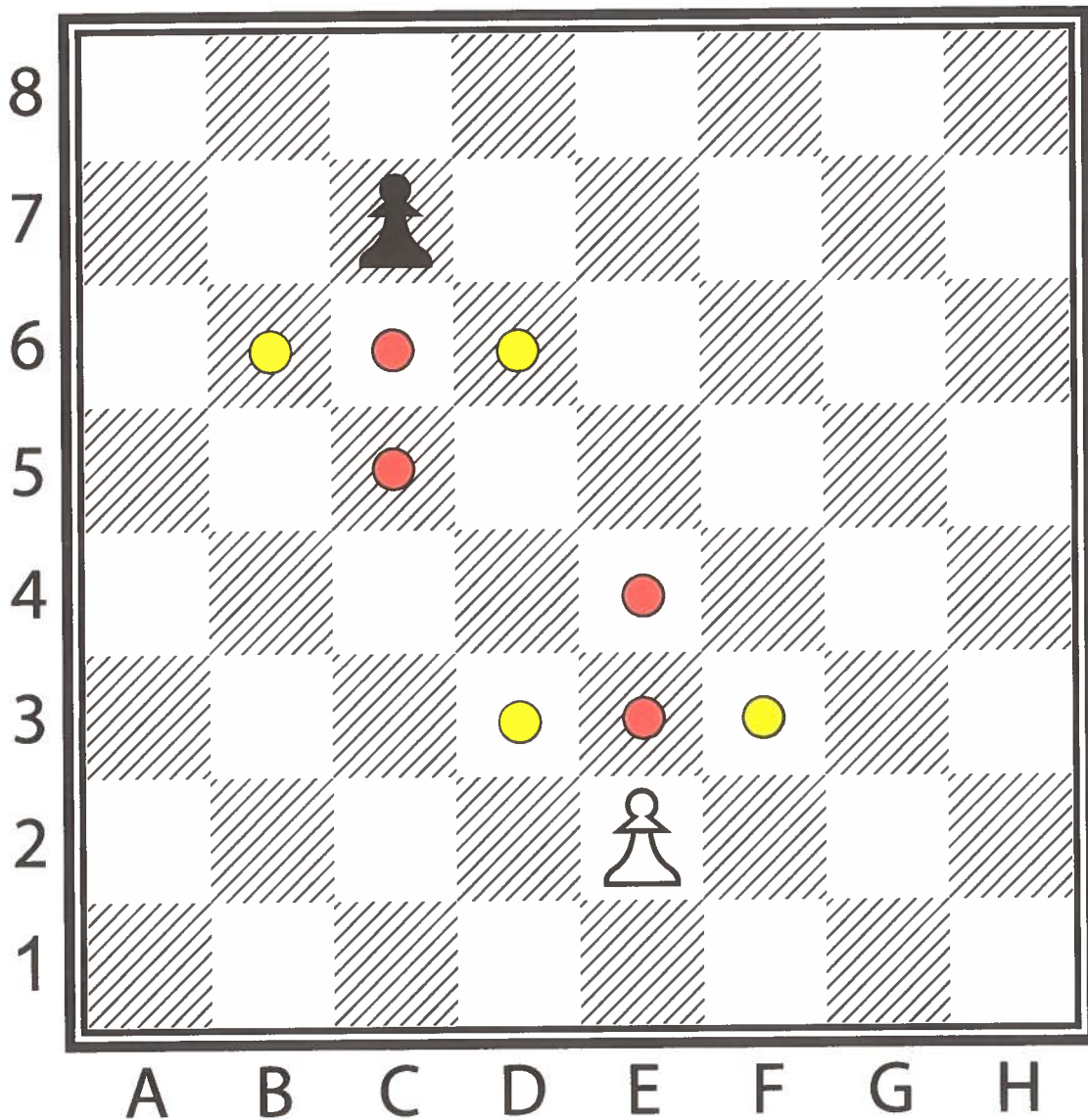




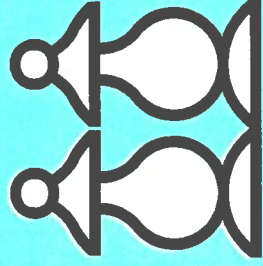
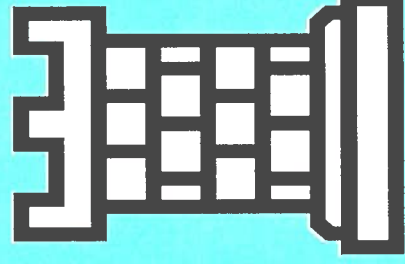
THE PAWN

Hi friends!

I am the pawn! I only can move forward, but I capture diagonally. I move one square at a time except in the first move when I can move two squares. I live in the castle with my seven brothers, and I represent the number 1.



CHAPTER

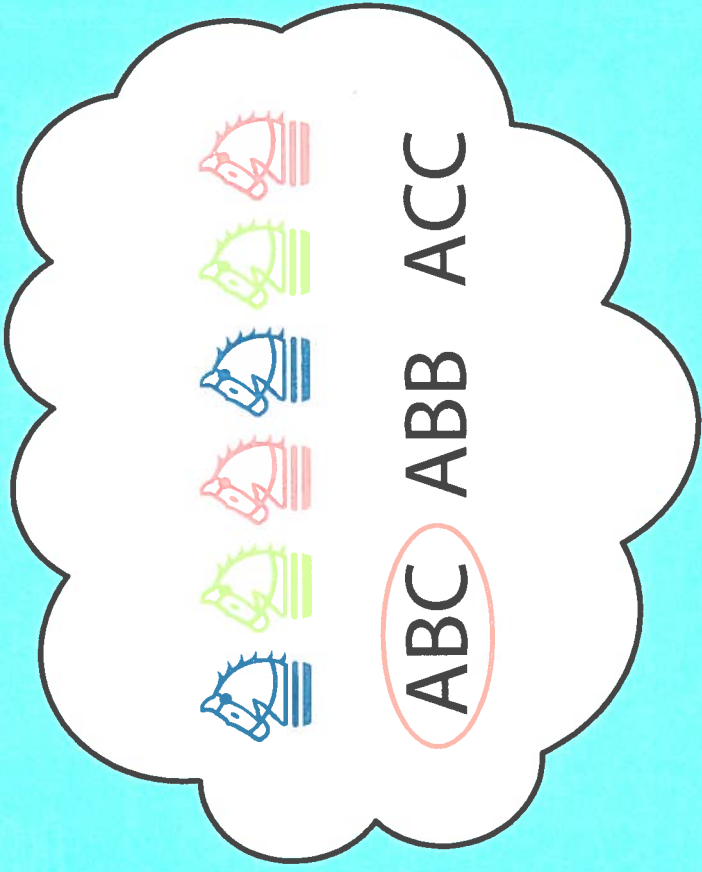


PATTERNS

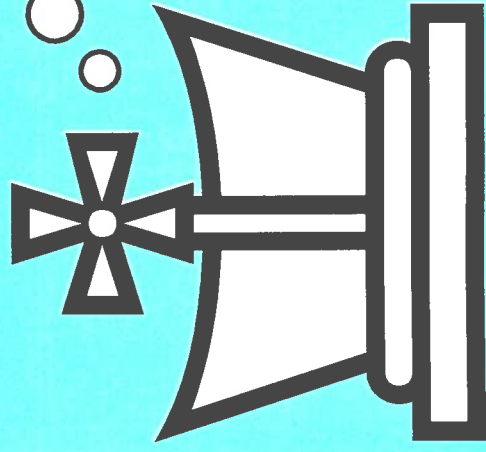
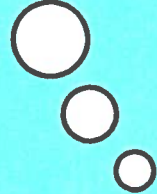
ally. I move one square
live in the castle with



H



ABC ABB ACC



Name _____

Lesson 7.1 Which Follows?



Circle the one that continues the pattern.



Common Core

MP1, MP2, MP3,
MP6, MP7



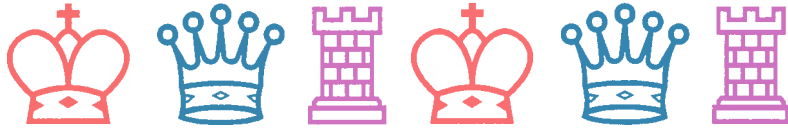




Name _____

Writing Patterns

Look at the patterns below, and write the letters that describe the patterns.
The first example is made for you.



ABC



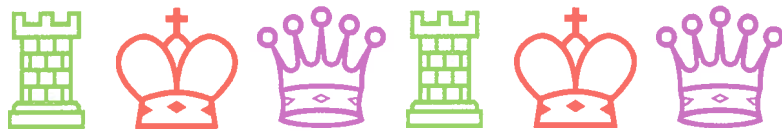
Blank box for writing the pattern description.



Blank box for writing the pattern description.



Blank box for writing the pattern description.



Blank box for writing the pattern description.



Blank box for writing the pattern description.

Name _____

Coloring Patterns



Color the chess pieces according to the written pattern for each row.



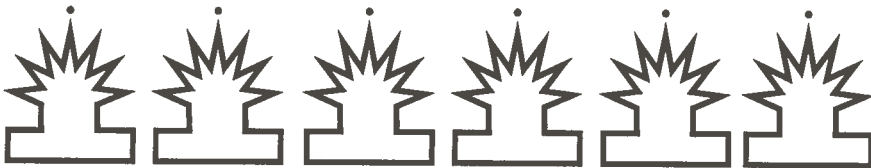
ABC



AAB



ABB



AB



AABB



ABBB

pattern for each row.

ABC

AAB

ABB

AB

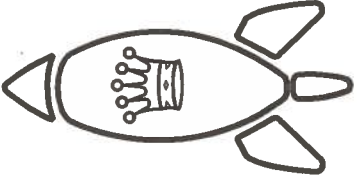
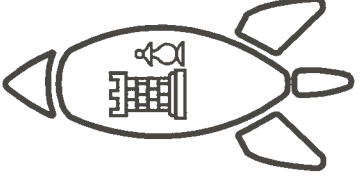
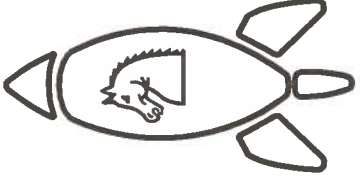
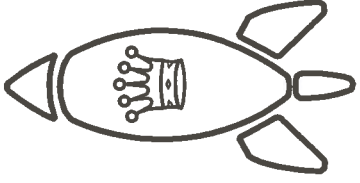
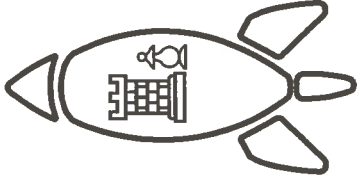
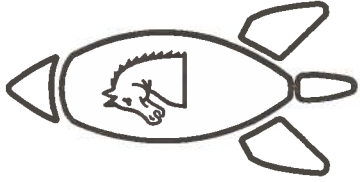
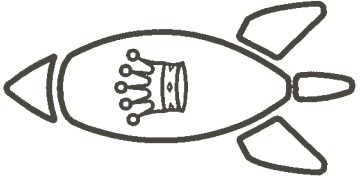
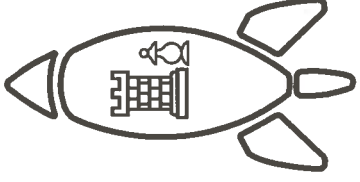
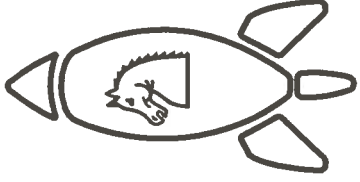
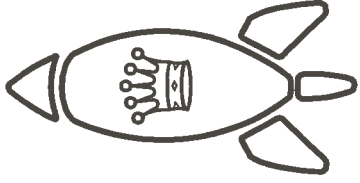
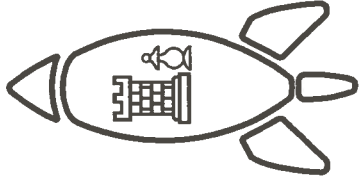
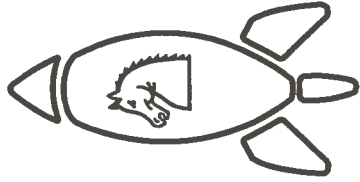
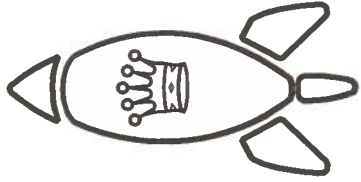
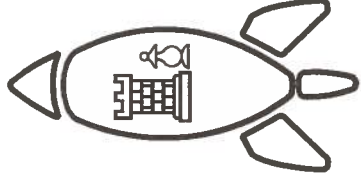
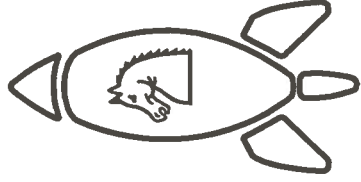
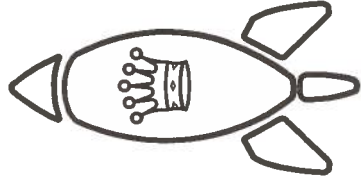
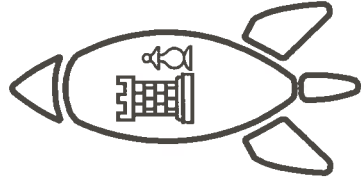
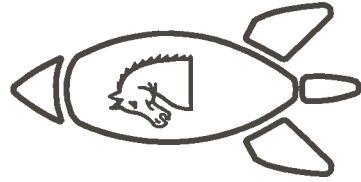
AABB

ABBB

Name _____

Lesson 7.2 Spaceships Pattern

Take a look to all of the spaceships. The pieces represent the number of passengers in each spaceship. Color the one that has three passengers red. Color the one that has six passengers green. Color the one with nine passengers blue. Describe the patterns.

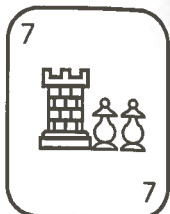
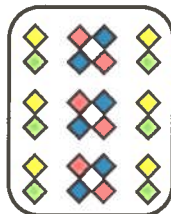
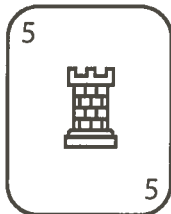
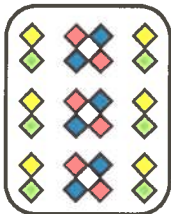
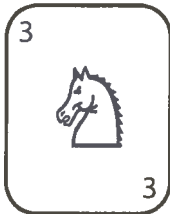
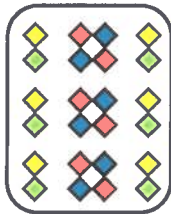
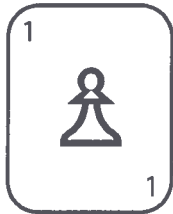


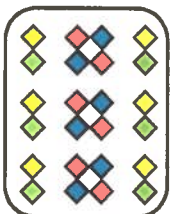
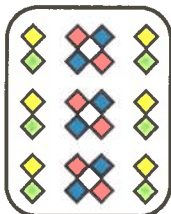
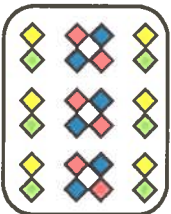
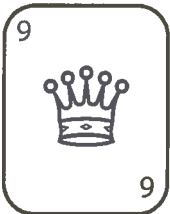
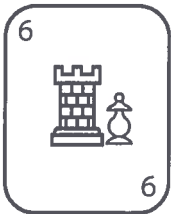
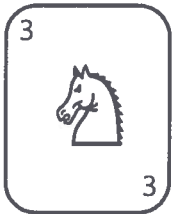
Name _____

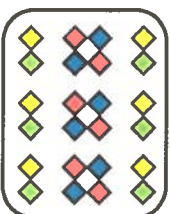
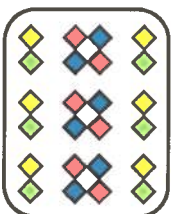
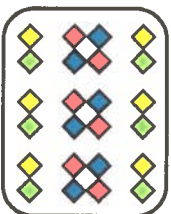
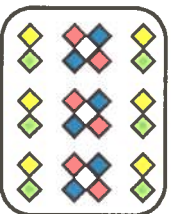
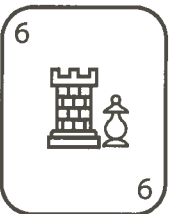
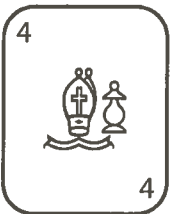
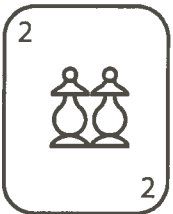
Chess Cards Pattern



Find the number pattern in each row, and write the number that is supposed to be in each hidden card.





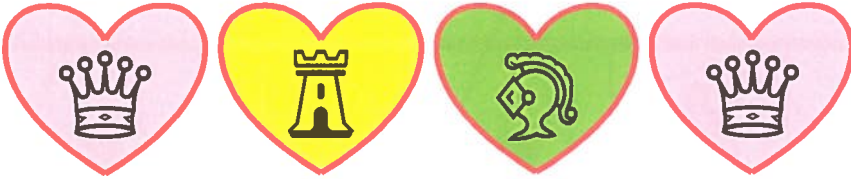


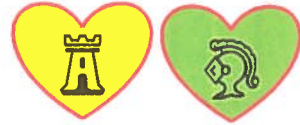
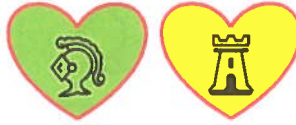
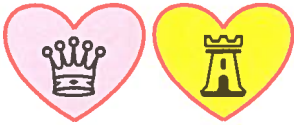
Name _____

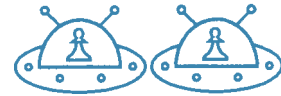
Lesson 7.3 Which Follows?



Circle the one that continues the pattern.









Name _____

Coloring Patterns



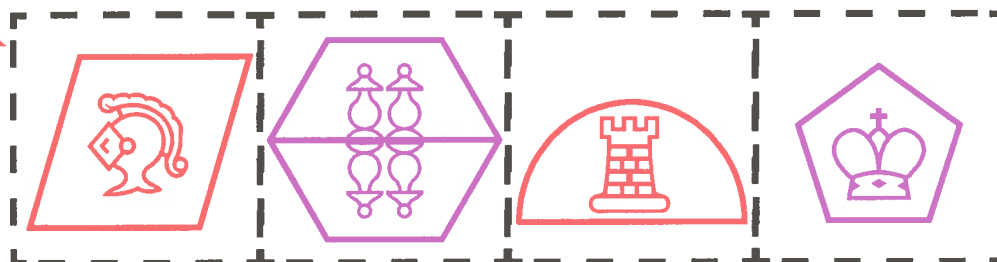
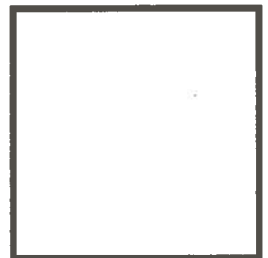
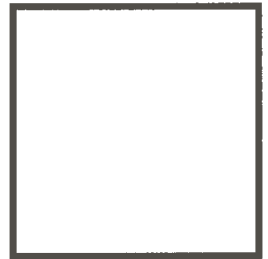
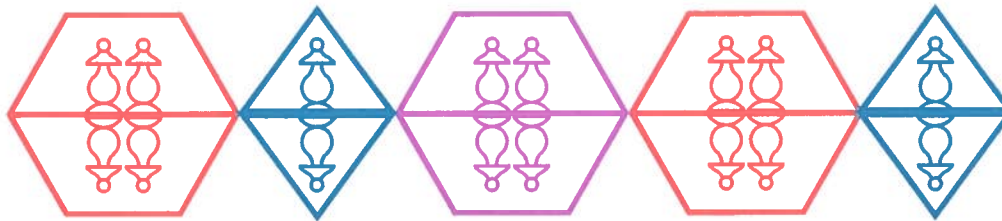
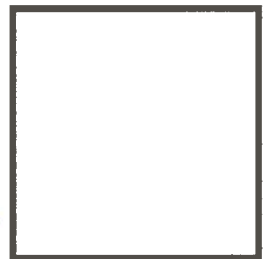
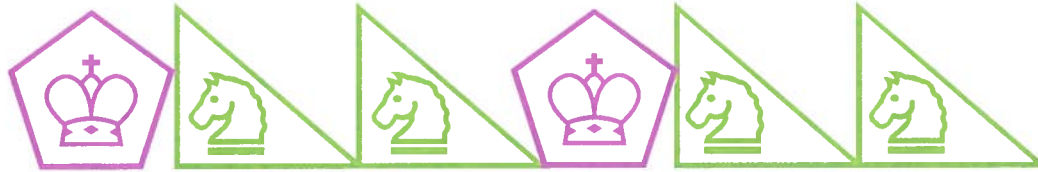
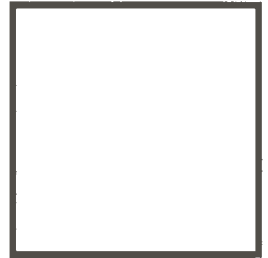
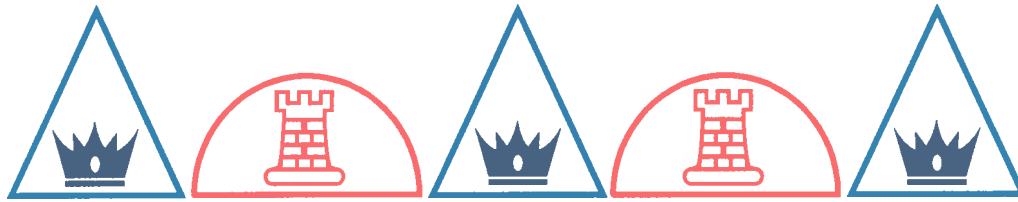
Color each set of pieces, and make your own pattern. Explain the pattern made.

Name _____

Shapes Pattern



Cut out and glue the shapes and pieces at the bottom of the page to complete each pattern.



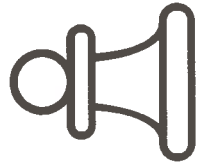
This page is blank for the cutting activity on the opposite side.

Name _____

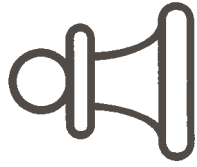
Lesson 7.4 Color Pieces Pattern I

Color the pieces according to the instructions for each row and follow the pattern.

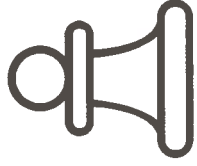
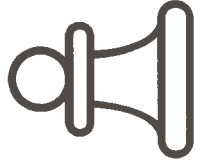
1.



Blue



Green



2.



Purple



Yellow



3.



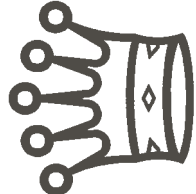
Red



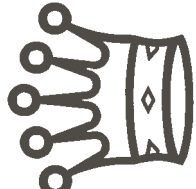
Blue



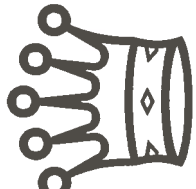
4.



Green



Pink



Name _____

Color Pieces Pattern II

Color the pieces according to the instructions for each row and follow the pattern.

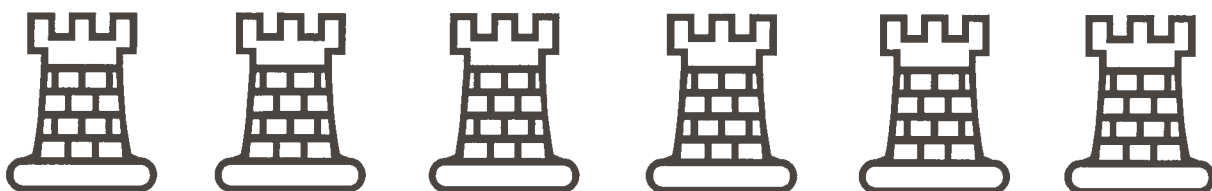
1.



Purple

Green

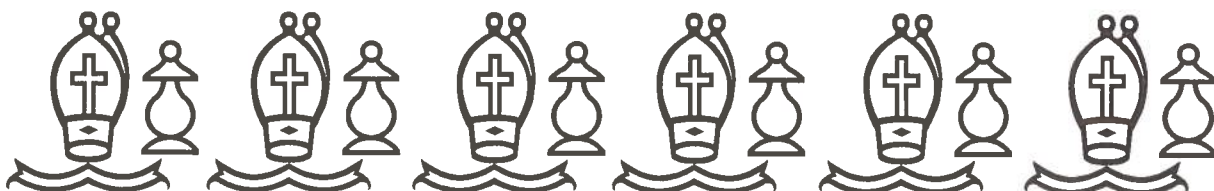
2.



Blue

Yellow

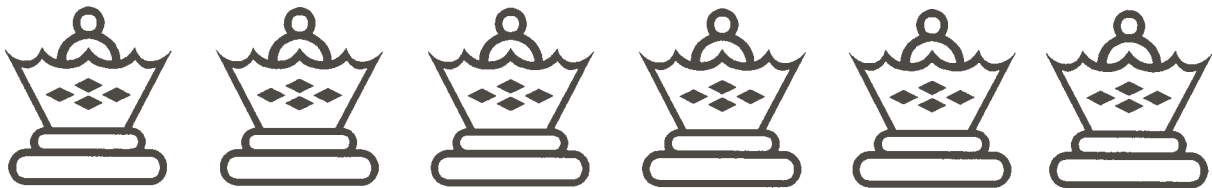
3.



Red

Blue

4.



Green

Orange

Name _____

Lesson 7.5 Color Pieces Pattern III

Color the pieces according to the instructions for each row and follow the pattern.



Yellow

Green



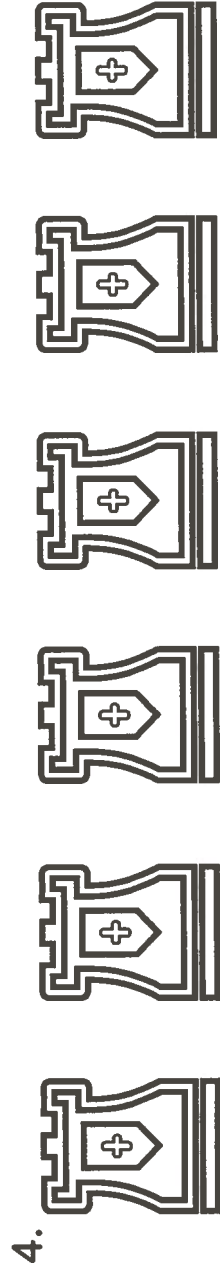
Blue

Pink



Red

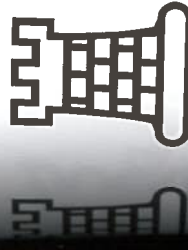
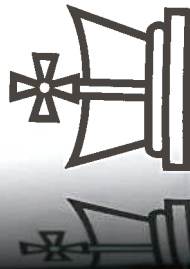
Green



Purple

Yellow

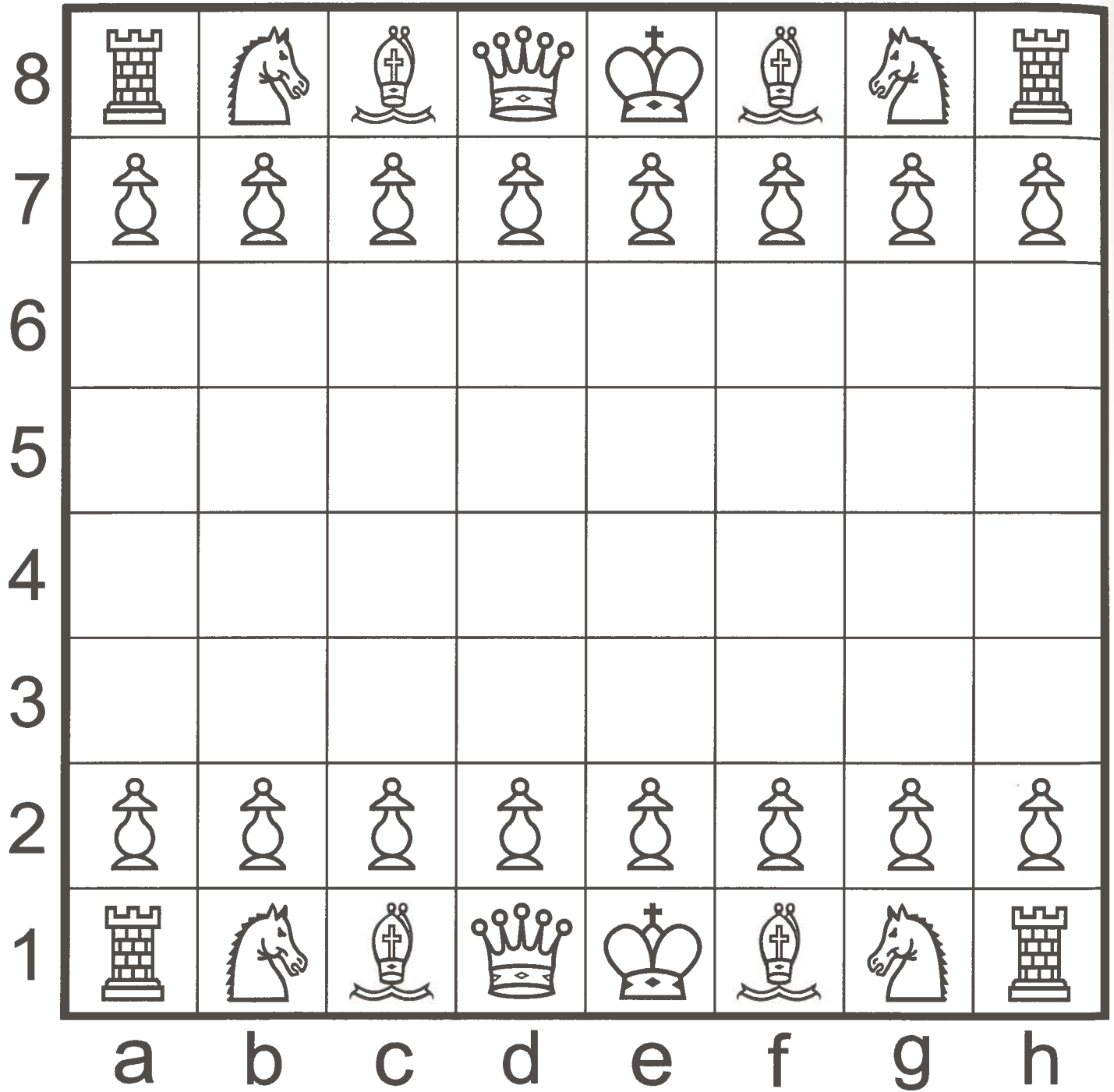
Color the pieces according to the instructions for each row and follow the pattern.









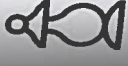



Name _____

My Colorful Chess Set

Color your chess set, and create your own pattern. Talk about your pattern with the class.



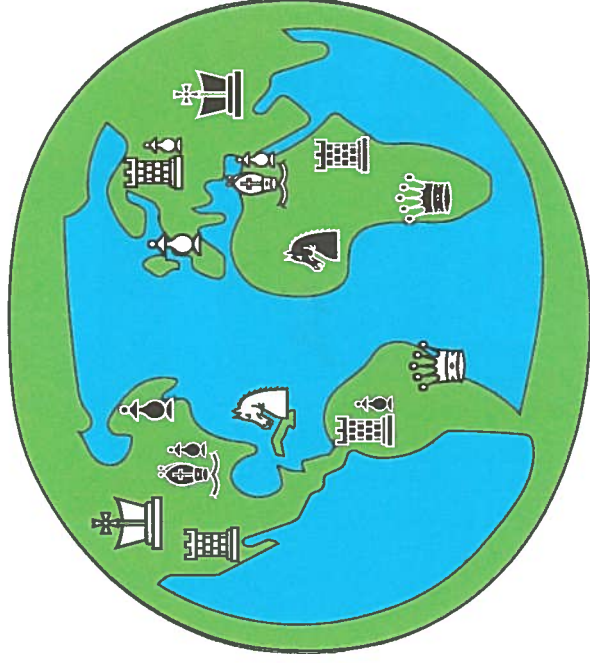
pattern with the class.

g

h

CERTIFICATE OF EXCELLENCE



This diploma is presented to

_____ for successfully completing the course of Chess 4 Math!

KINDERGARTEN

_____ Date

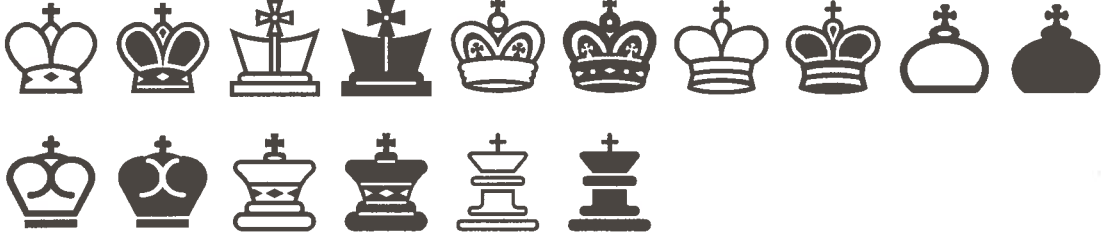
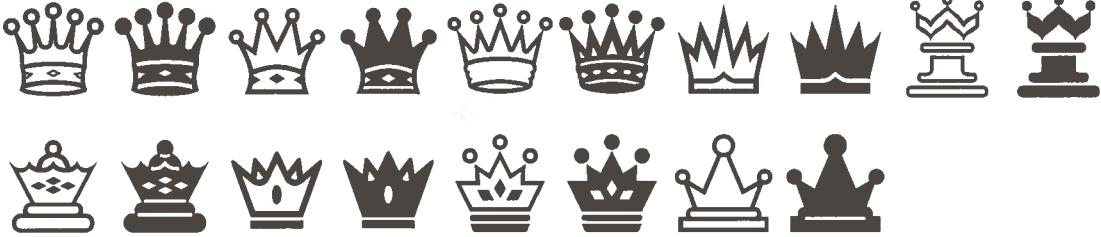
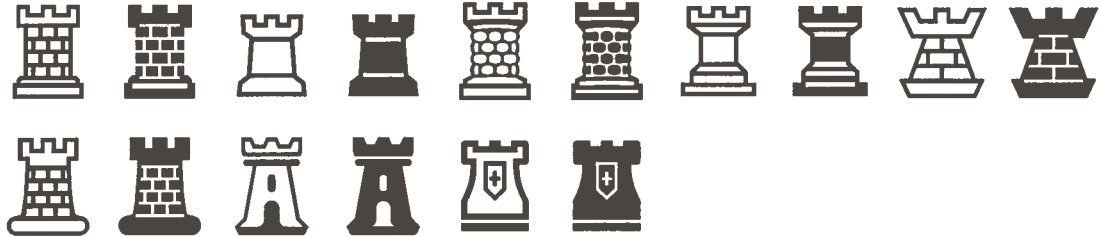



_____ Teacher's Signature

See you in 1ST GRADE!













GLOSSARY






The chess pieces symbols

KING:	
QUEEN:	
ROOK:	
BISHOP:	
KNIGHT:	
PAWN:	

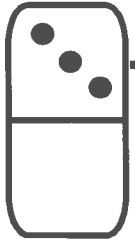
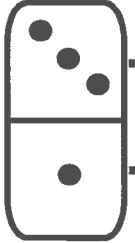
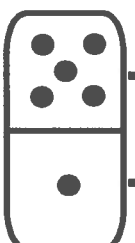
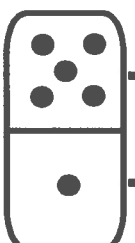




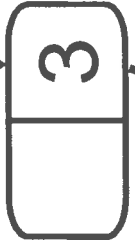



Chess Number Line

0	1	2	3	4	5	6	7	8	9
									

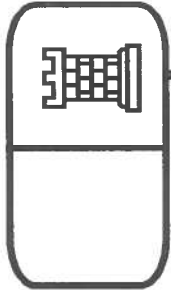
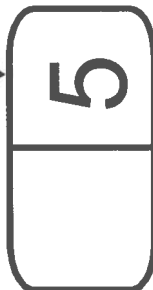
Mathematical Chess Table

Name	Symbol	Number
King		0
Queen		9
Rook		5
Bishop		3
Knight		3
Pawn		1

The Chess Domino




One digit number	Two digit number	Tens	Ones
			
			
			
<u>3</u>	<u>13</u>	<u>13</u>	<u>15</u>

1.




5

2.

14

3.

26