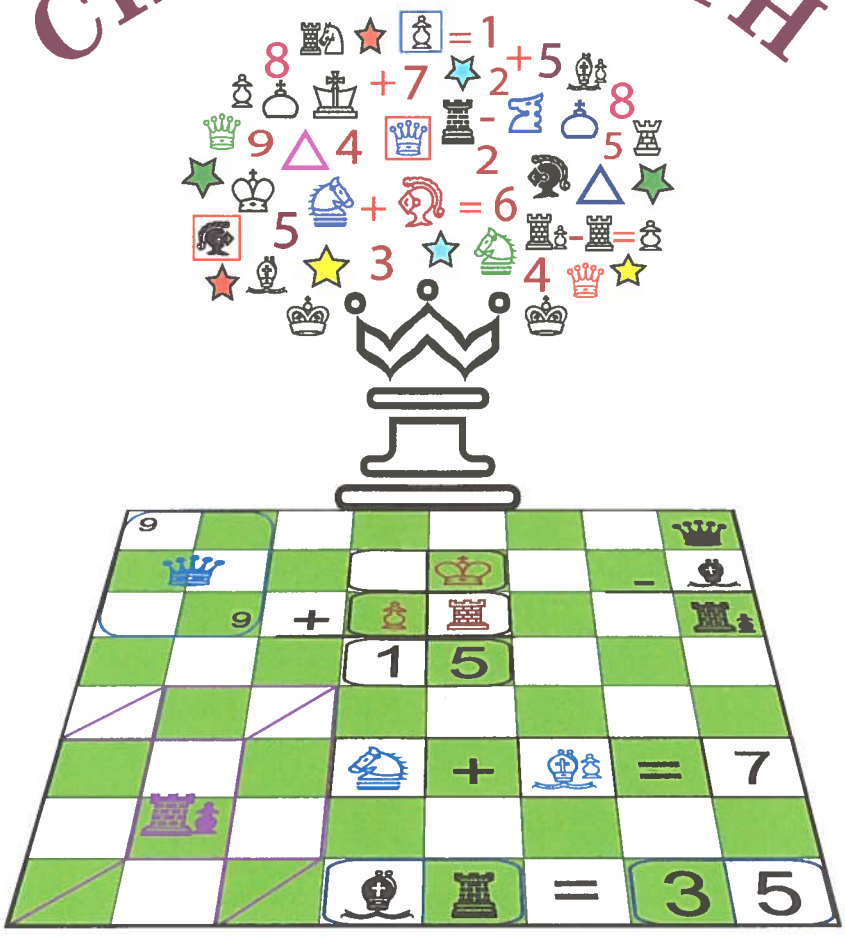
CHESS 4 MATH



"Play chess, learn math and train your mind."

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

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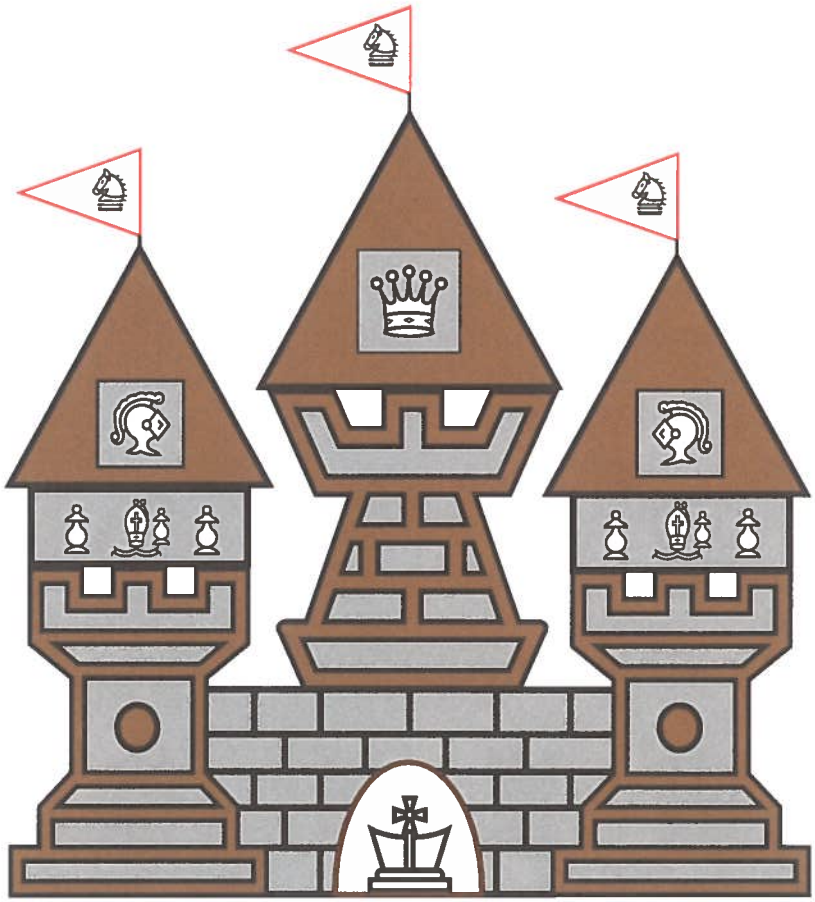
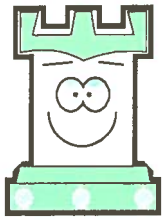
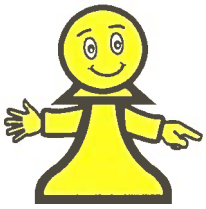
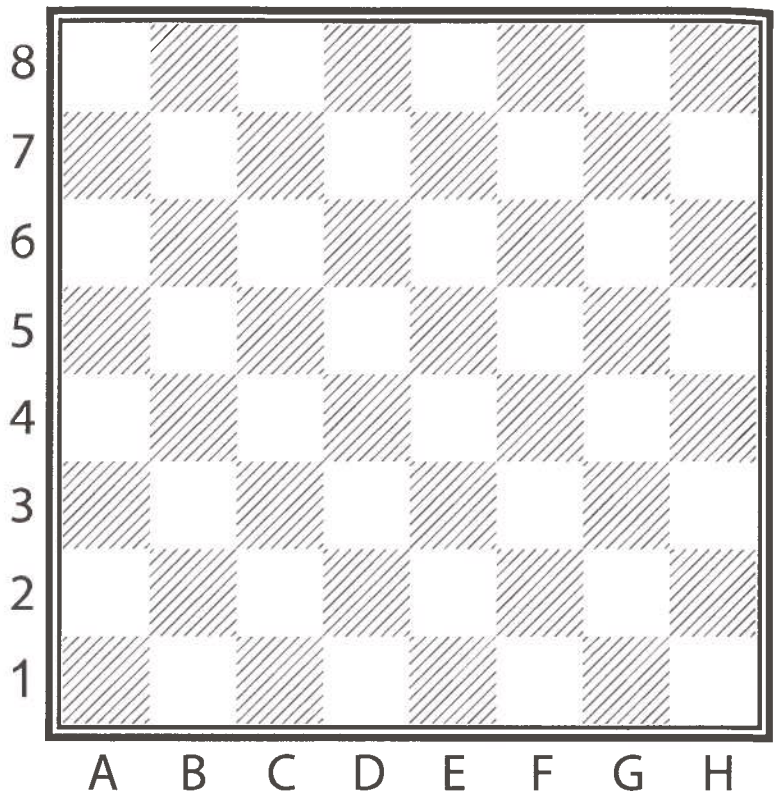






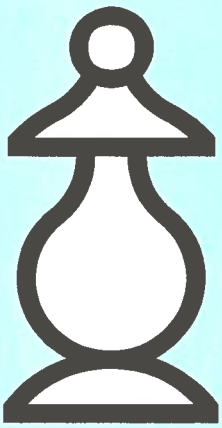


Did you know that the game of chess was created in India almost 1500 years ago?

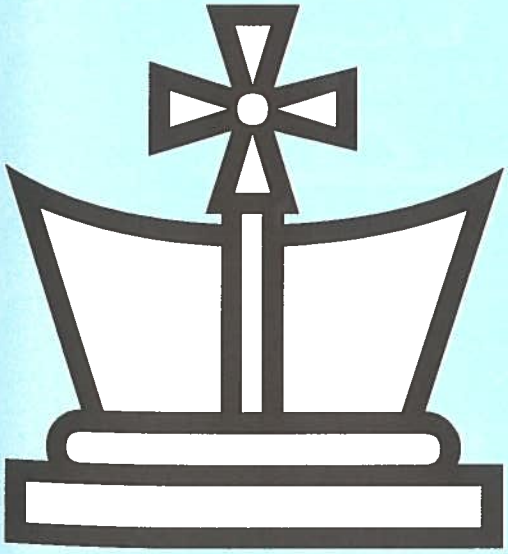
During that time the game was called "Chaturanga," which means "four divisions" (of the military) infantry, cavalry, elephantry, and chariotry, represented by the pieces that would evolve into the modern pawn, knight, bishop, and rook, respectively.

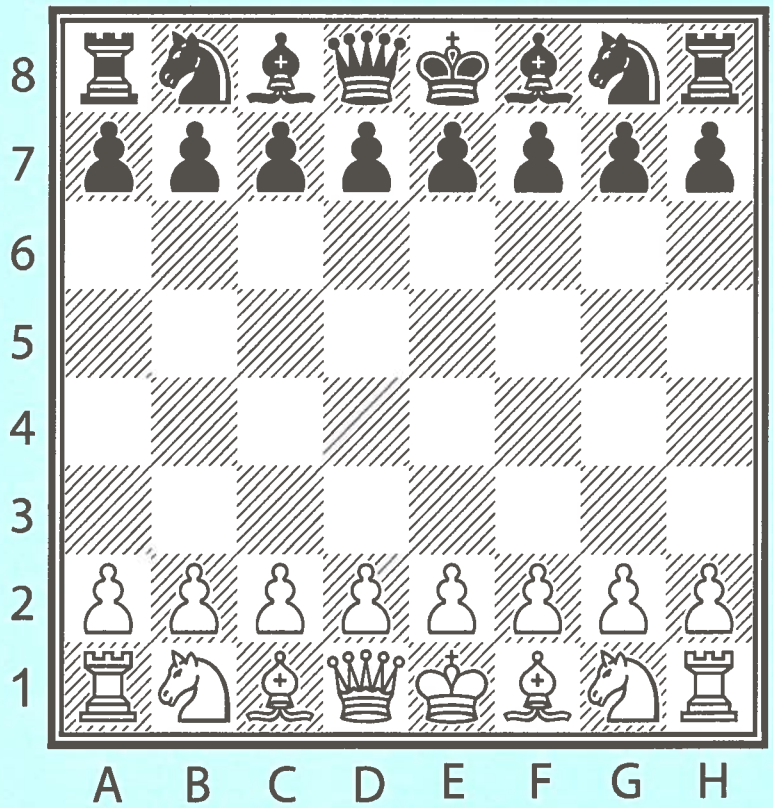
Nowadays, more than 600 million people play chess, making it the world's most popular board game.

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
									

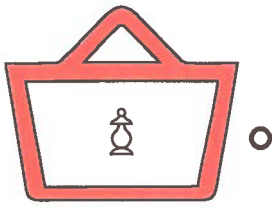
Name_____

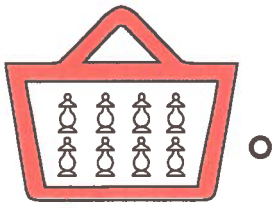
Lesson 1.1 Counting and Matching

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

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

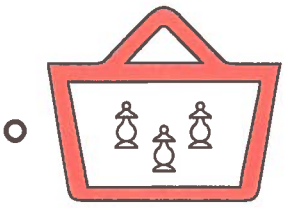
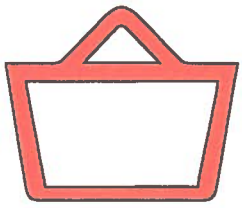
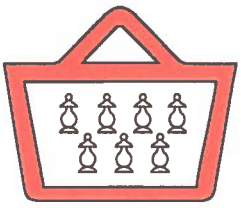
1









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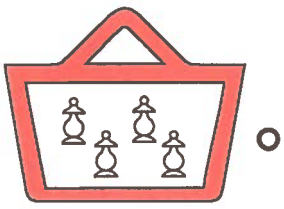
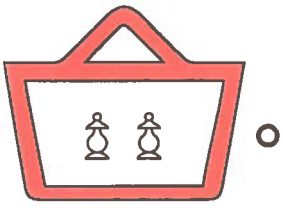
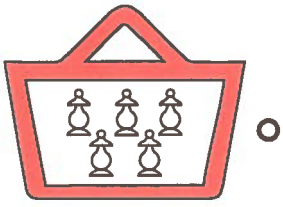




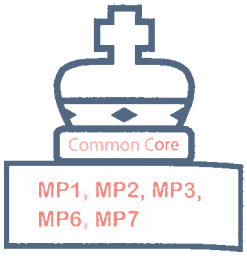


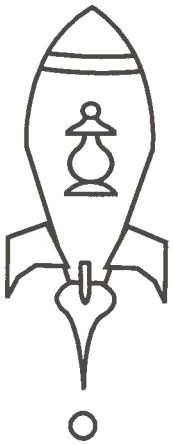


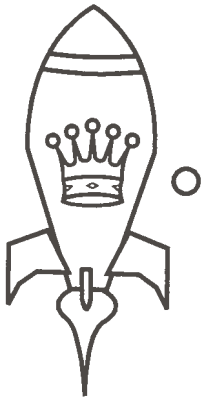

Name_____

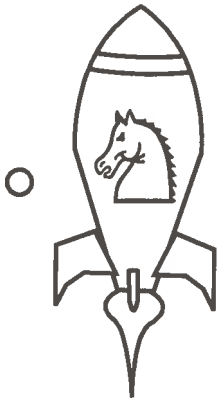
Chess Galaxy

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.

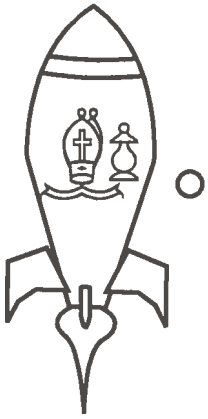


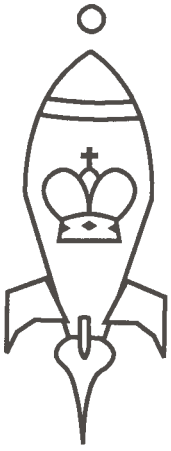


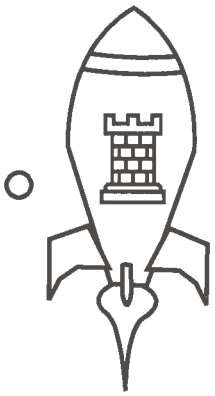




1 4 9 5 0 3







Name_____

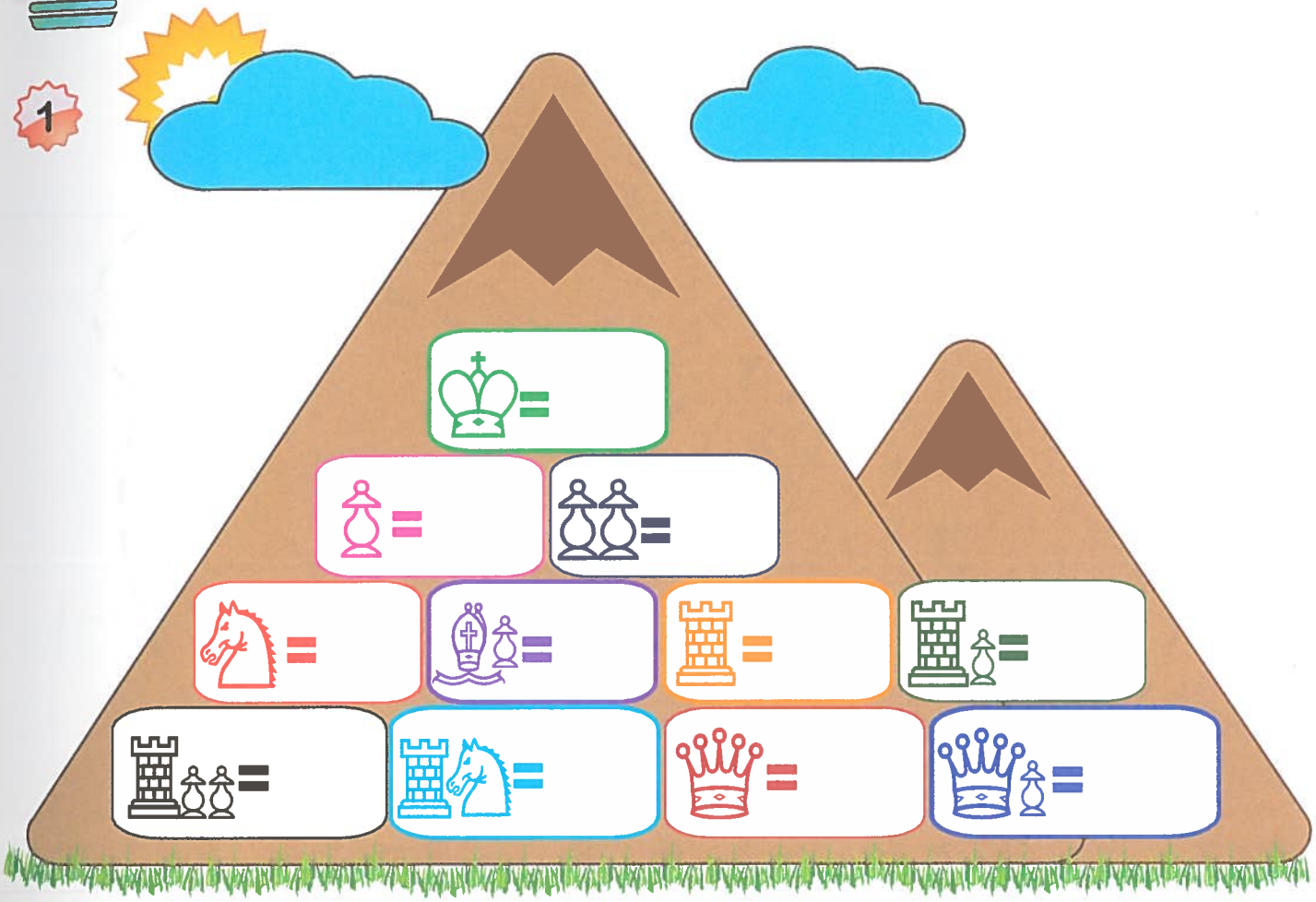
The Chess Mountain

Common Core

MP1, MP2, MP3, MP6, MP7

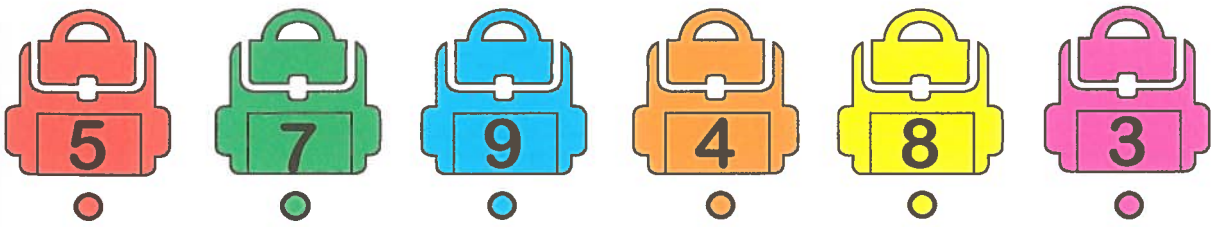
Find the corresponding number for each set of pieces. Can you recognize the pattern?

1



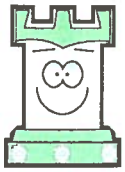
2

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



Name_____

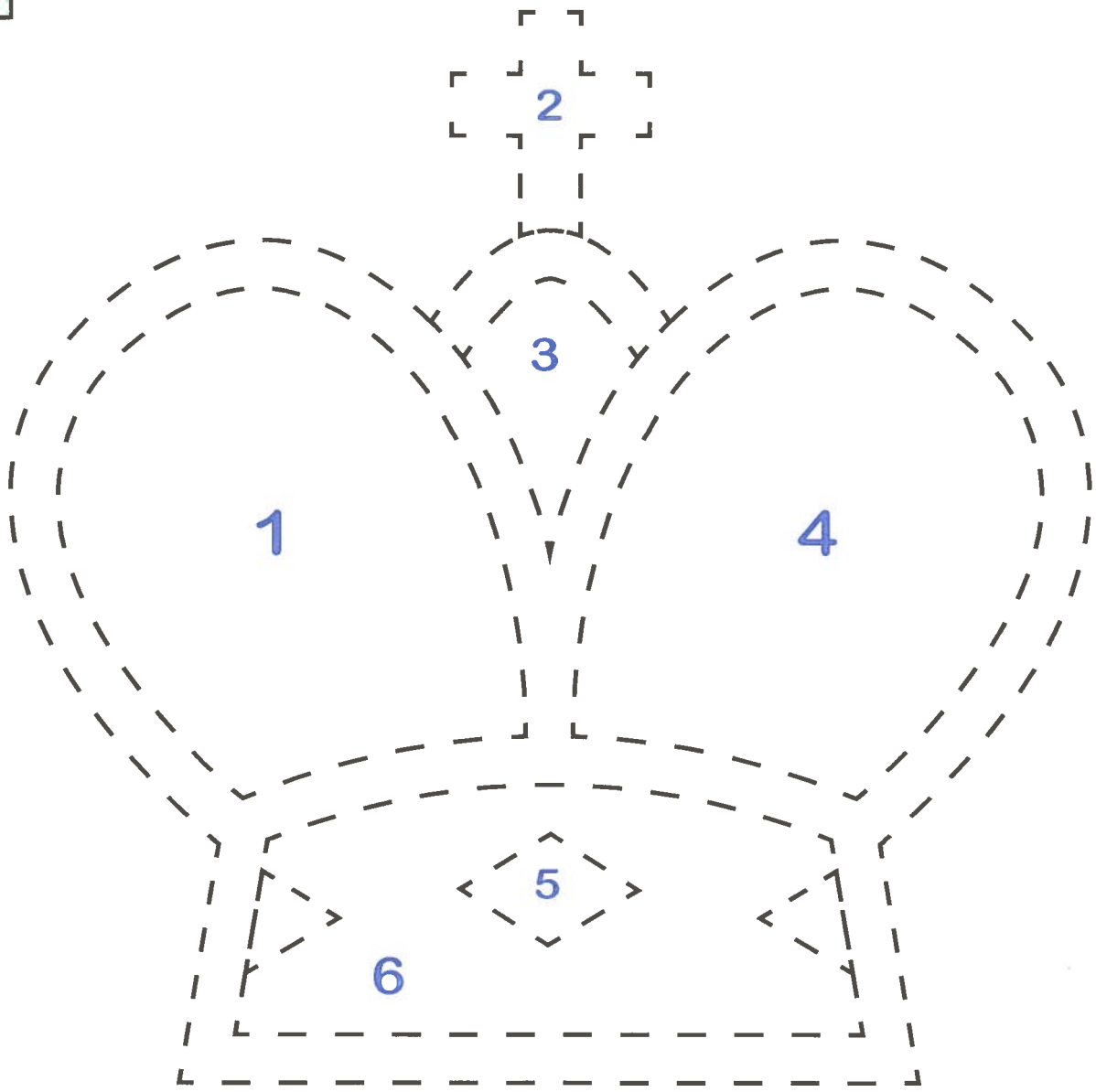
Lesson 1.2 Trace and Color: The King



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

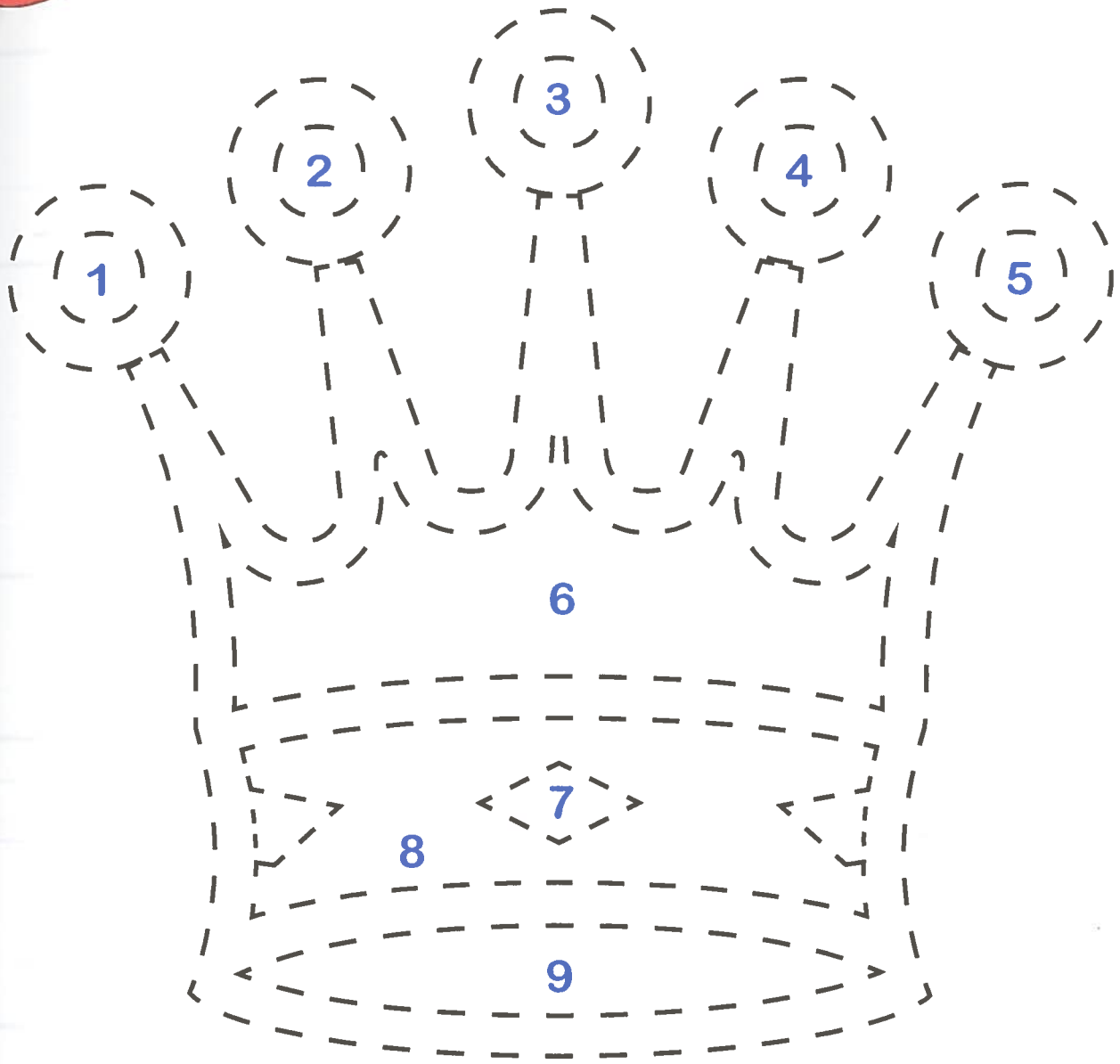
Name _____

Trace and Color: The Queen

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

Common Core

MP1, MP2, MP3, MP6, MP7



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

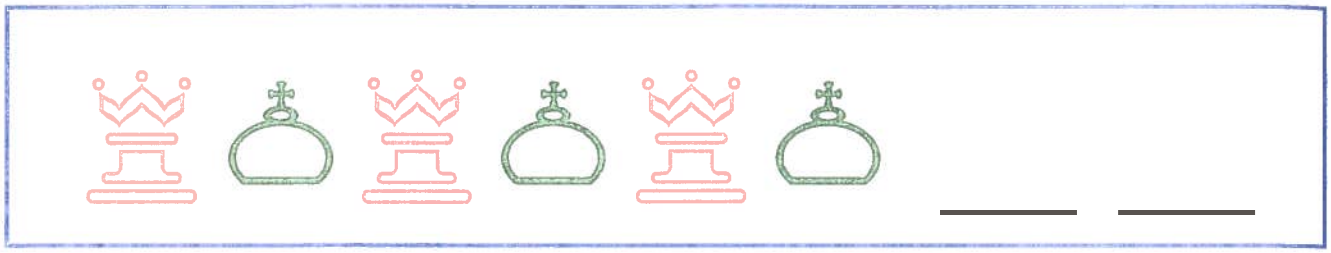
Name_____

Patterns

Circle the one that continues the pattern.

Common Core

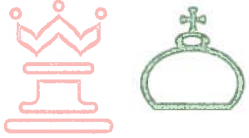
MP1, MP2, MP3, MP6, MP7

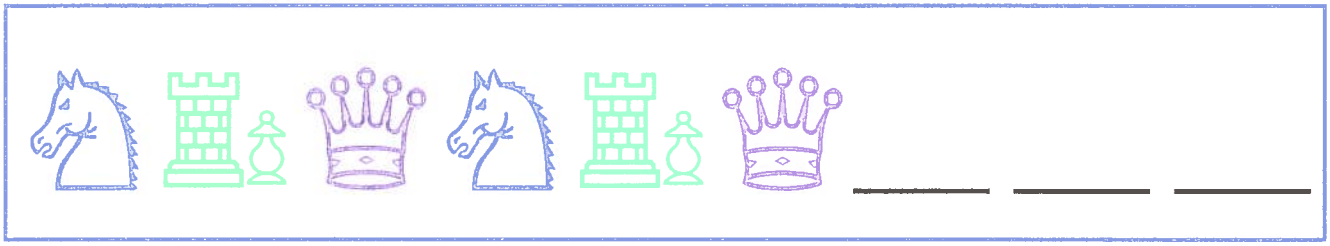


A

B

C

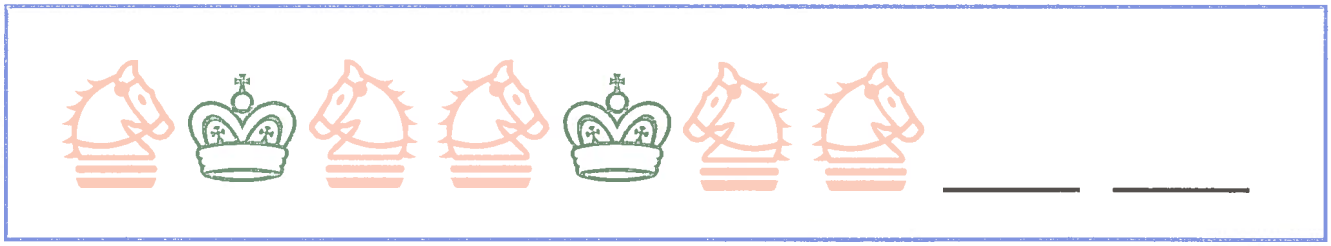




A

B

C



A

B

C

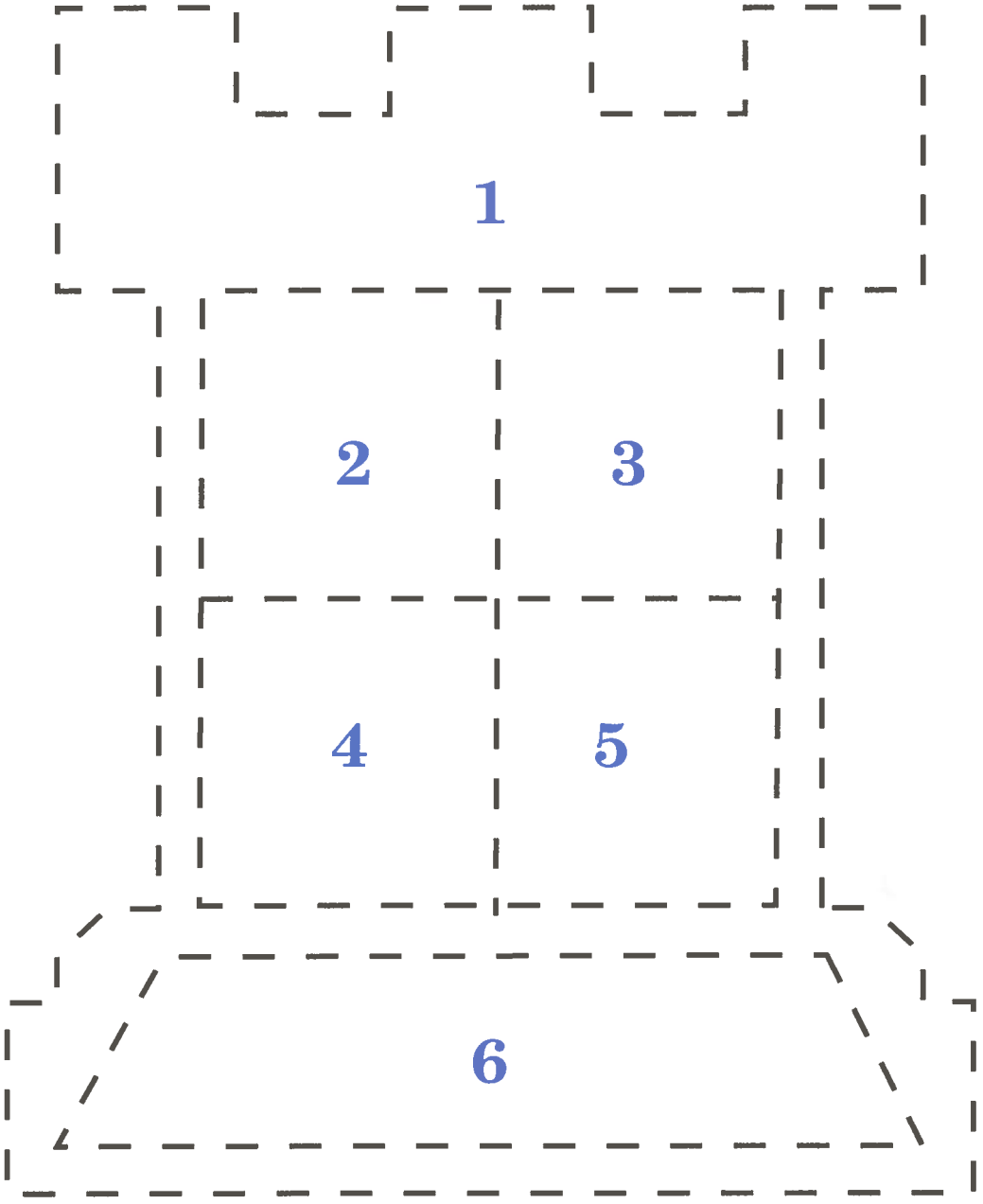
Name_____

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

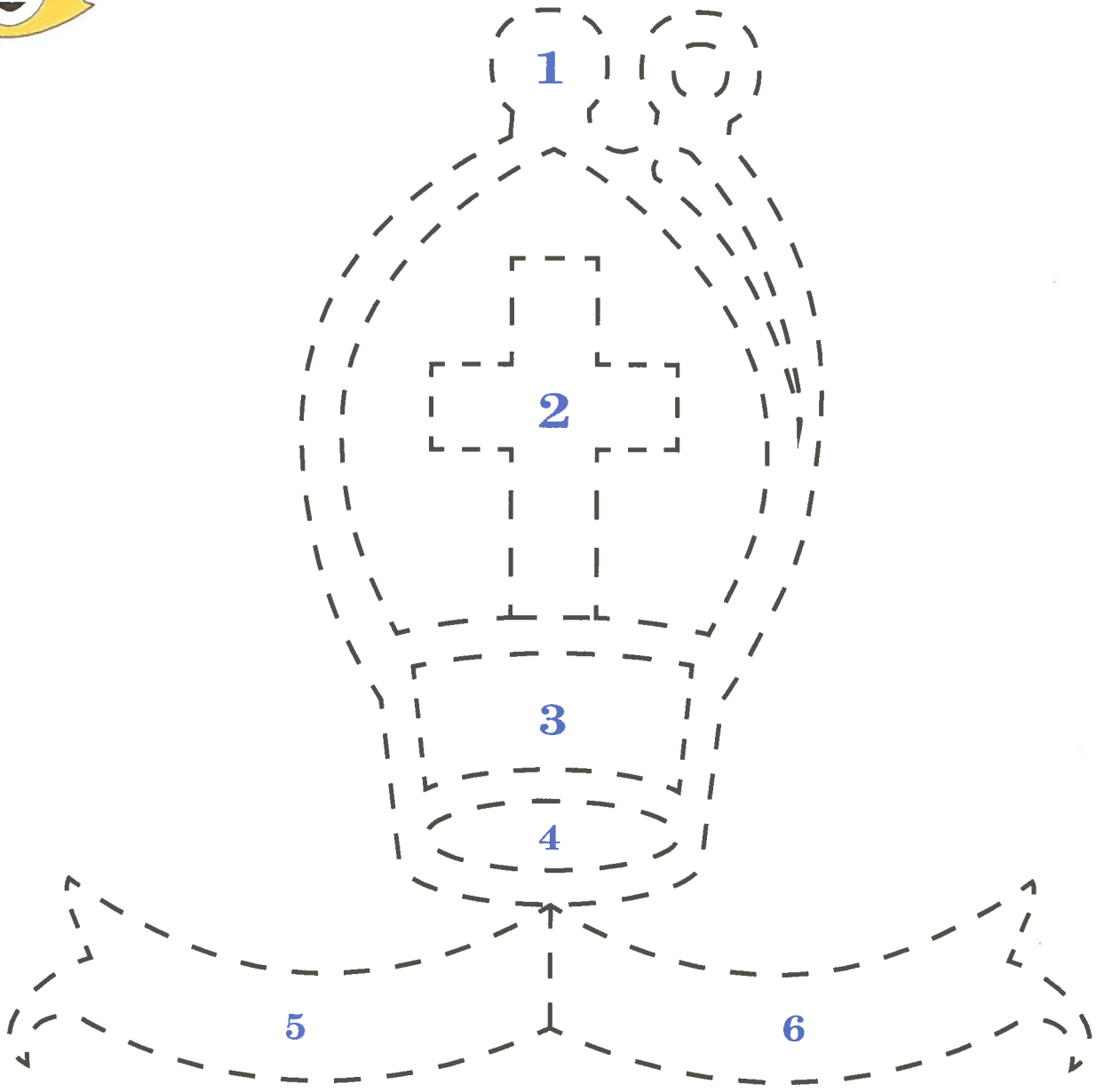
Name_____

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

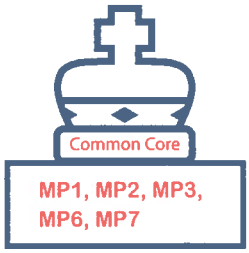


: Red	: Pink
: Orange	: Yellow
: Blue	: Green

Name_____

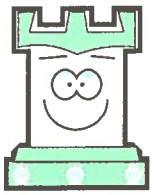
Patterns

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

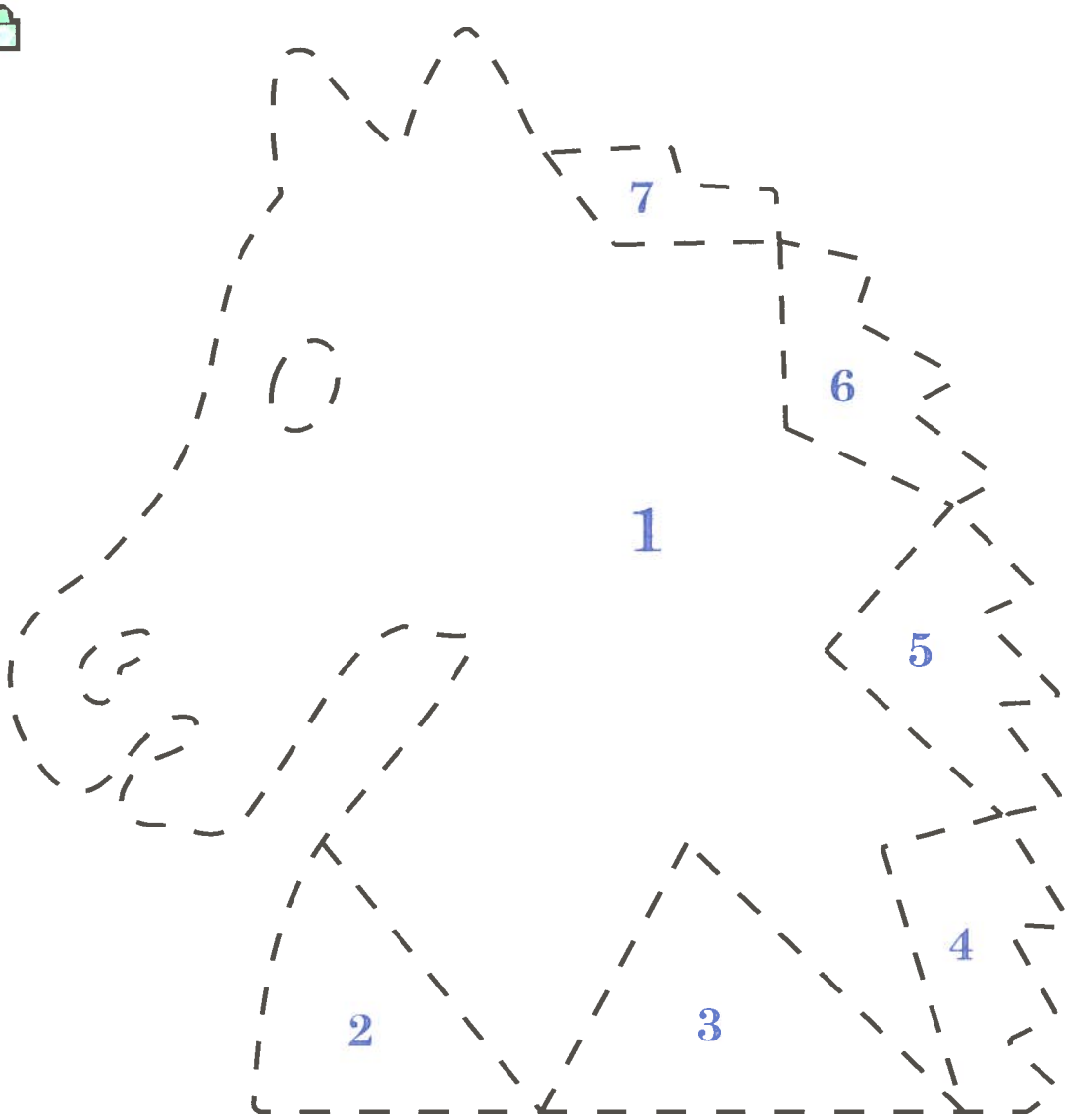


Name_____

Trace and Color: The Knight



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



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

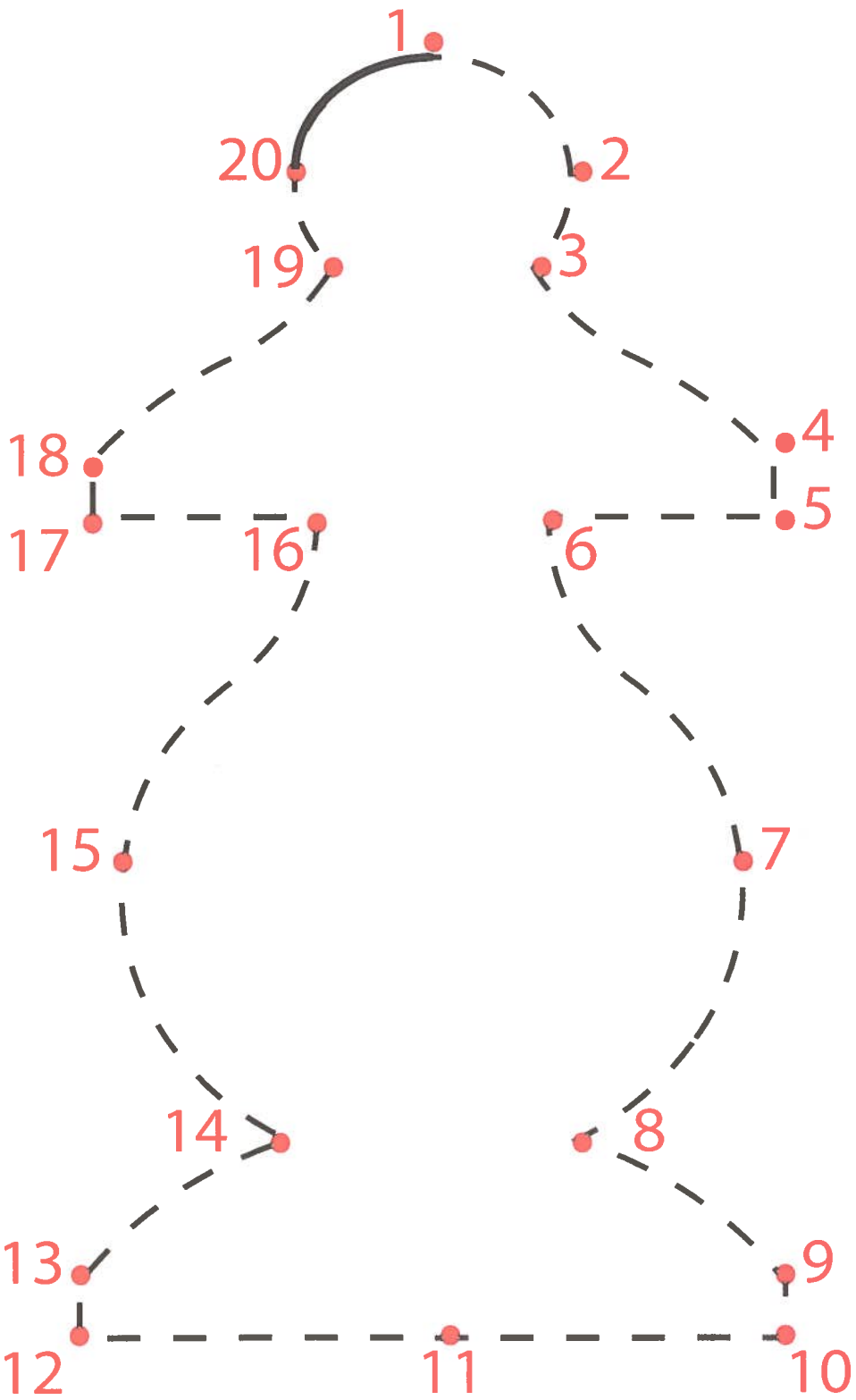
Name _____

Trace and Color: The Pawn

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

Common Core

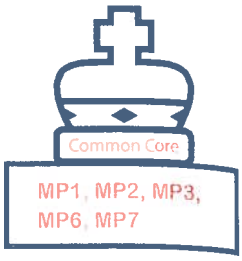
MP1, MP2, MP3, MP6, MP7



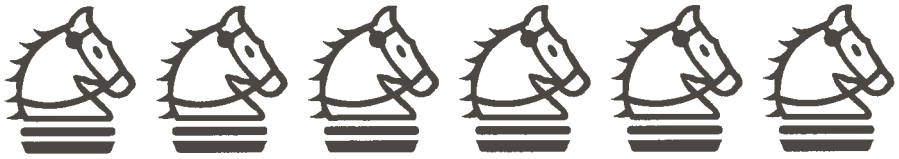
Name_____

Lesson 1.4 Patterns

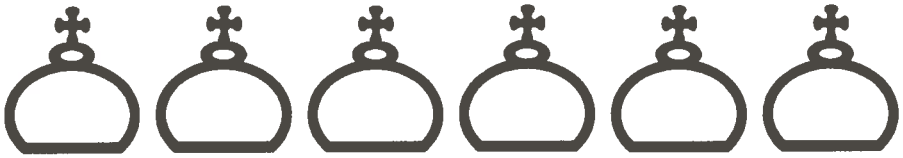
Color the chess pieces according to the written pattern for each row.



ABC



AAB



ABB

AB

AABB

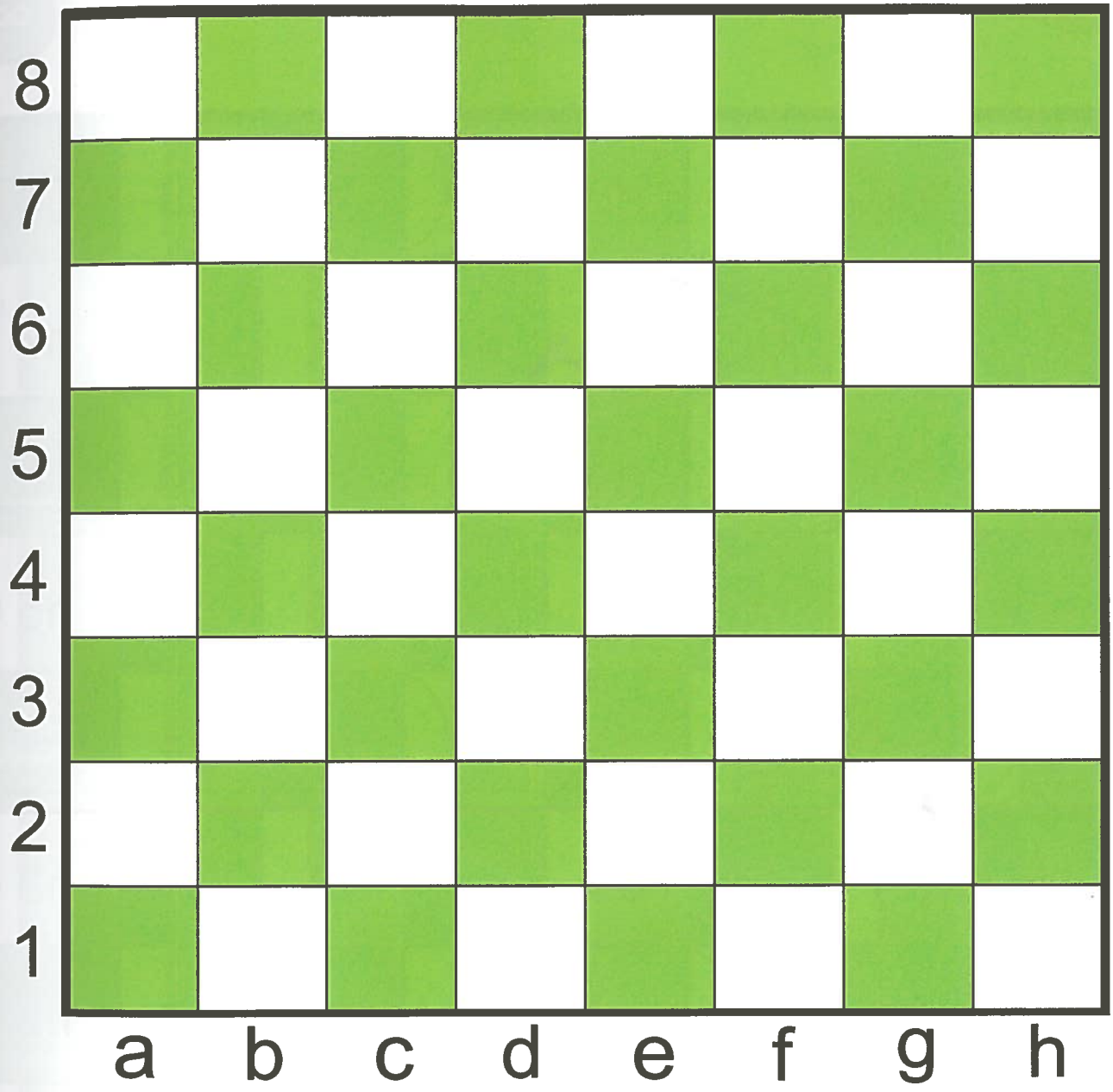
ABBB

Name_____

The Chessboard

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

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?



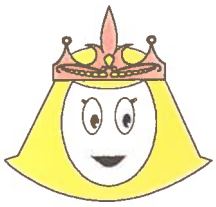
Total number of squares: _____

Light squares: _____

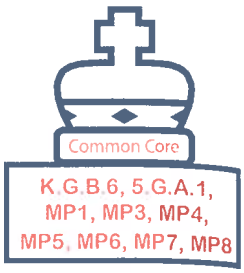
Green squares: _____

Name_____

Lesson 1.5 The Algebraic Notation



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

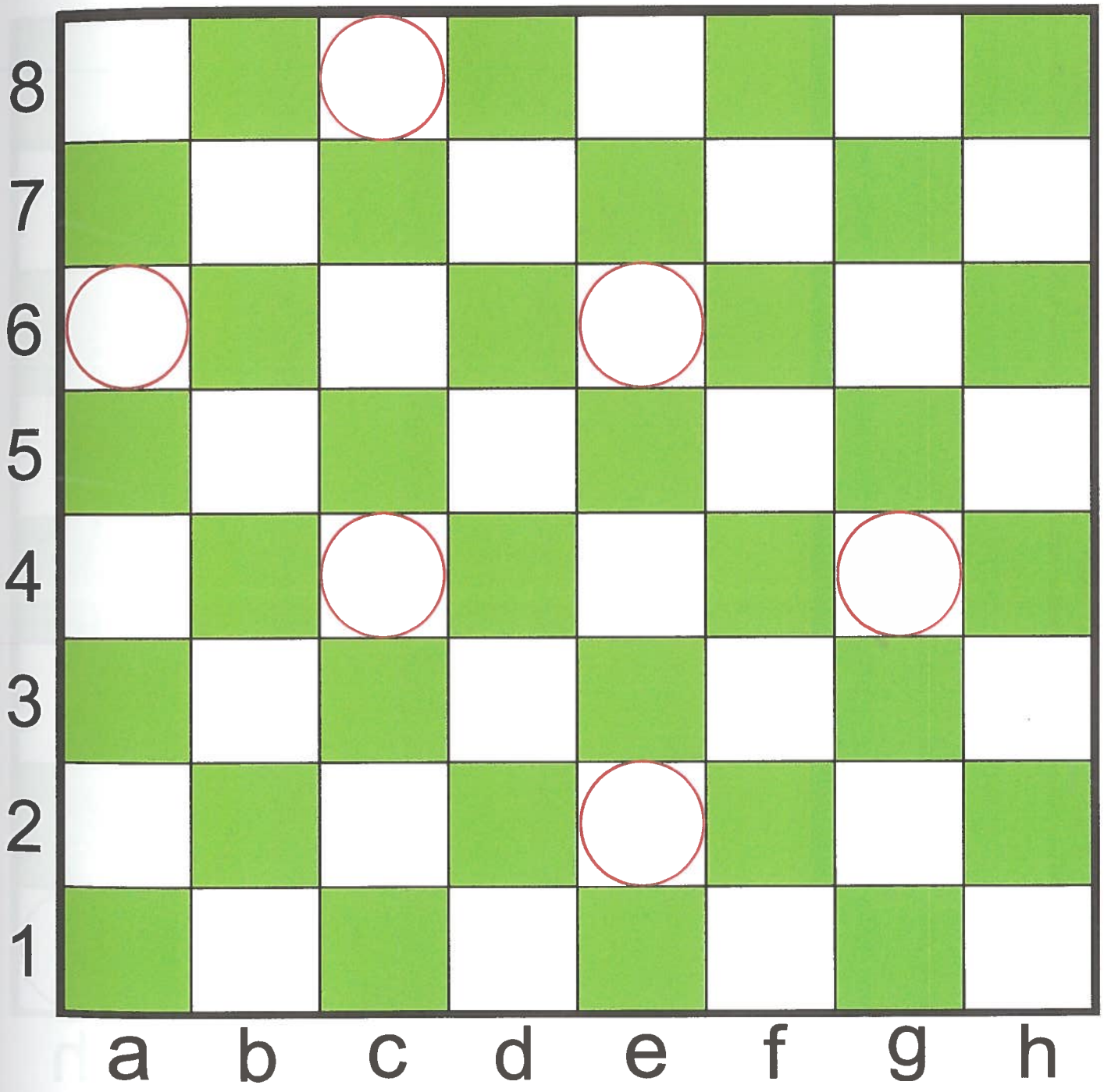


8	a8	b8	c8	d8	e8	f8	g8	h8
7	a7	b7	c7	d7	e7	f7	g7	h7
6	a6	b6	c6	d6	e6	f6	g6	h6
5	a5	b5	c5	d5	e5	f5	g5	h5
4	a4	b4	c4	d4	e4	f4	g4	h4
3	a3	b3	c3	d3	e3	f3	g3	h3
2	a2	b2	c2	d2	e2	f2	g2	h2
1	a1	b1	c1	d1	e1	f1	g1	h1
	a	b	c	d	e	f	g	h

Name_____

Naming Squares I

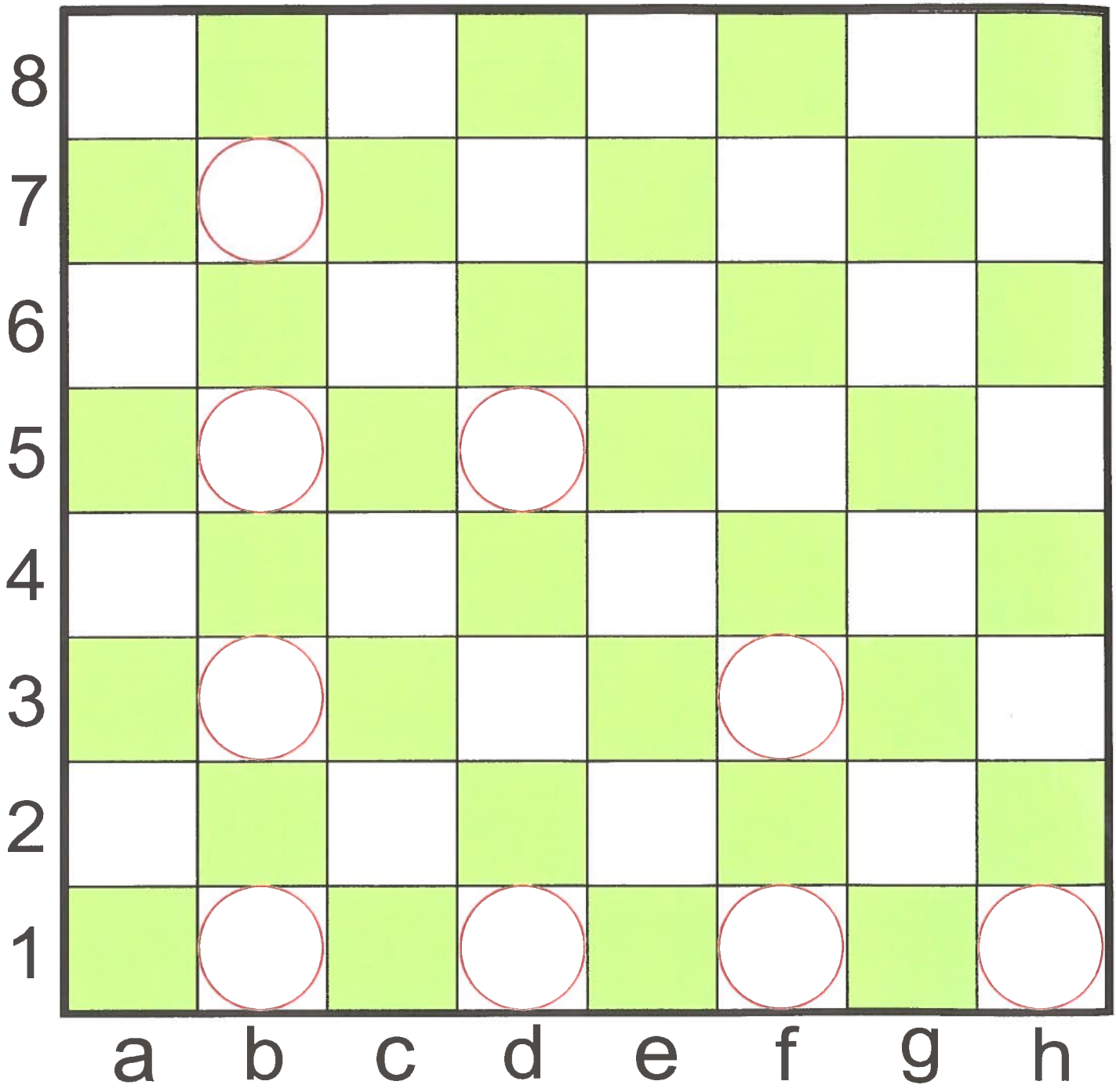
Identify and name the squares represented by the circles. Connect the circles with a straight line in columns, rows, and diagonals. What type of shapes can you see?



Name_____

Naming Squares II

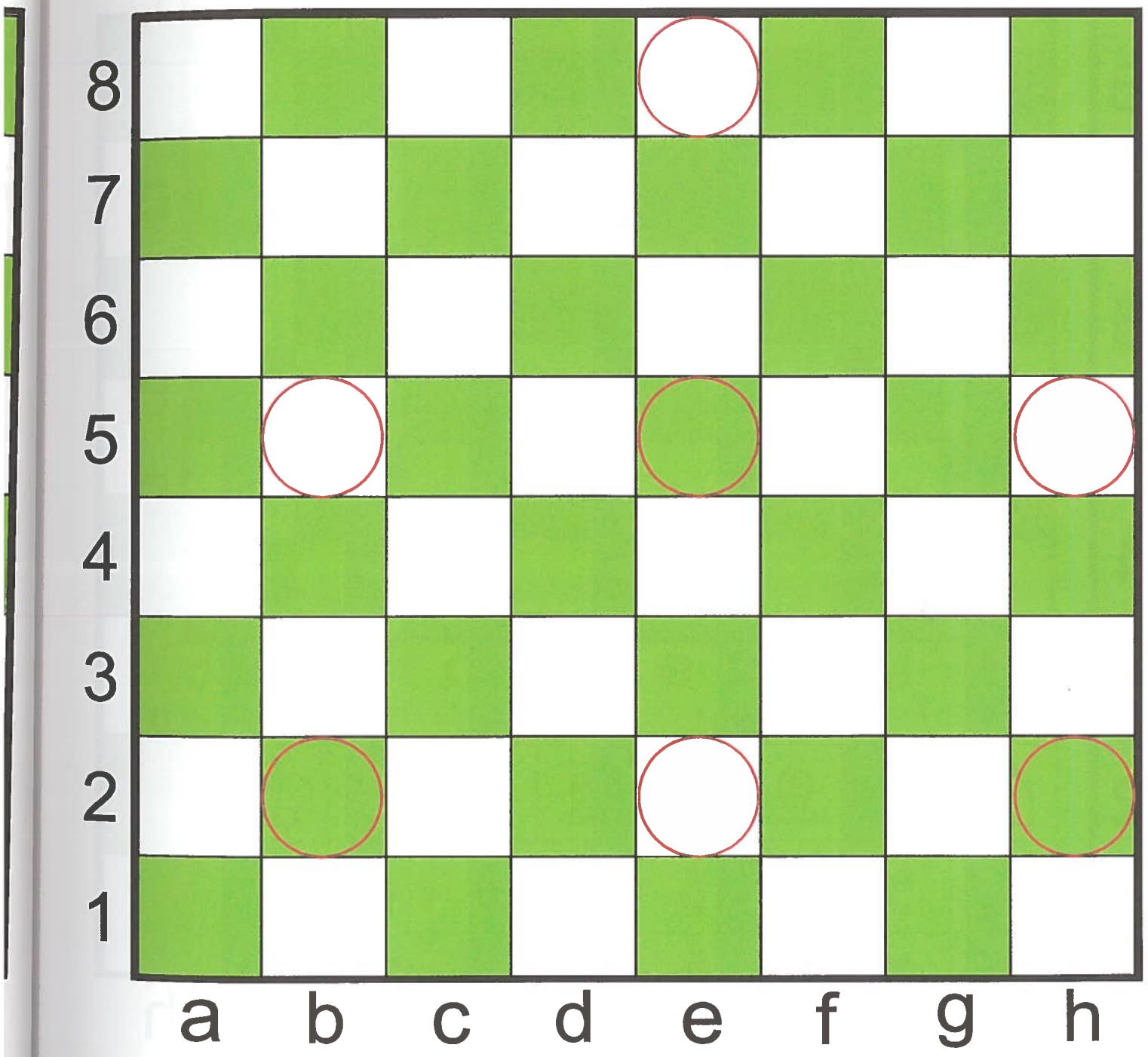
Identify and name the squares represented by the circles.
Connect the squares that the teacher reads and find the shapes.



Name_____

Naming Squares III

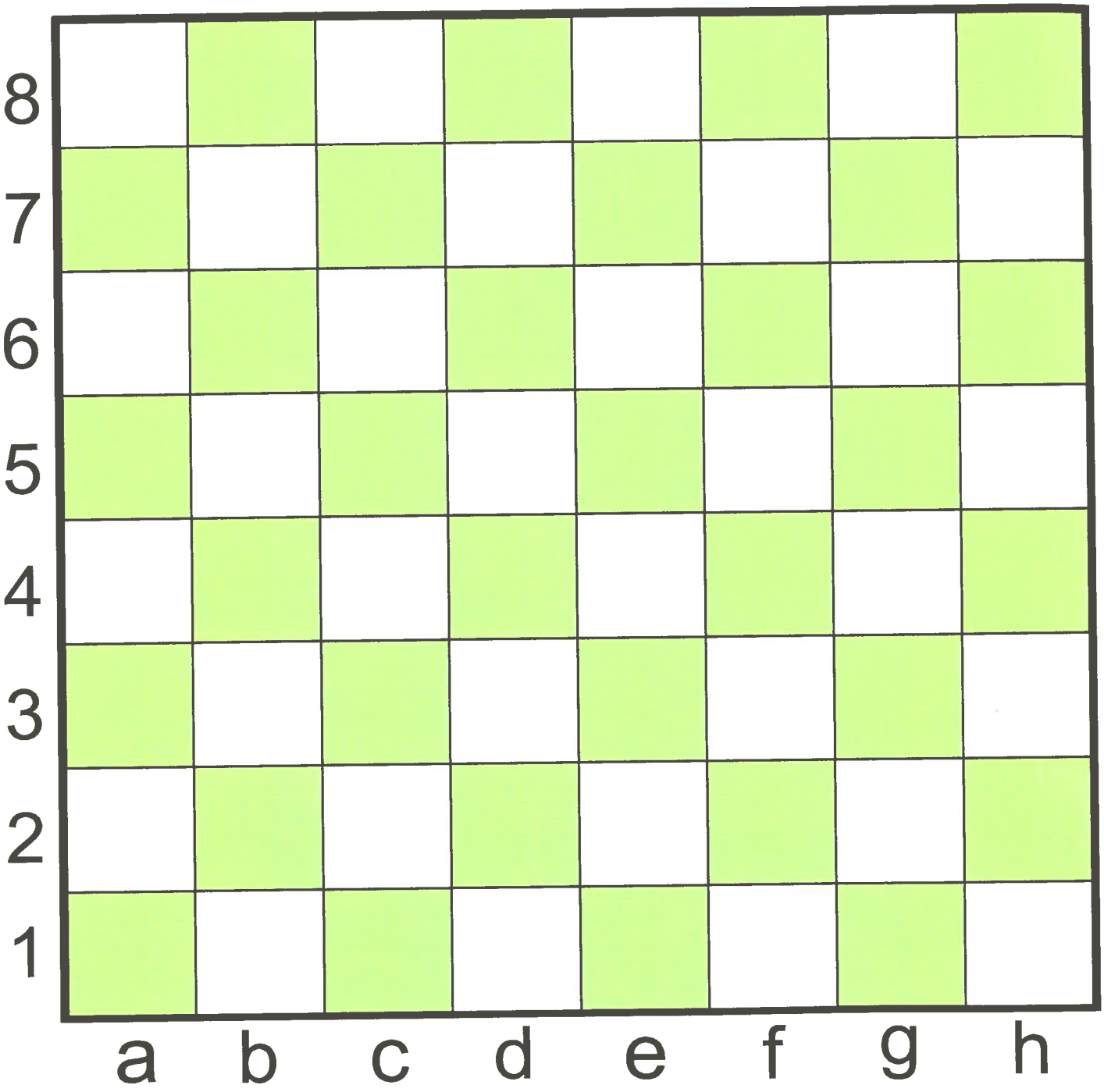
Identify and name the squares represented by the circles.
Connect the squares that the teacher reads and find the shapes.



Name_____

Naming Squares IV

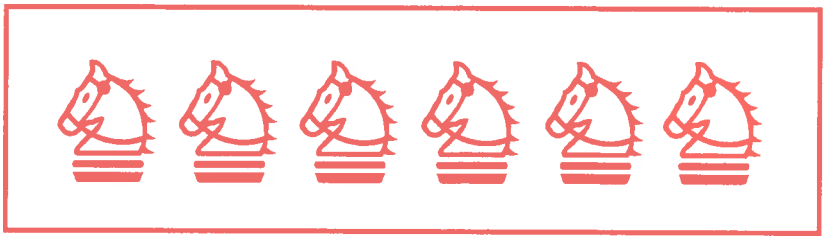
On the chessboard find the following squares and write the names: b4, c5, b6, e7, g5, e3. Connect with straight line: b4-b6-c5-e3-g5-e7-b4.
How many shapes do you see? Do you see something else?

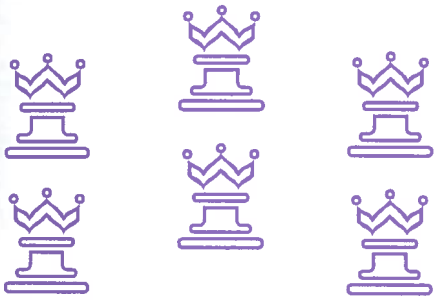


Name _____

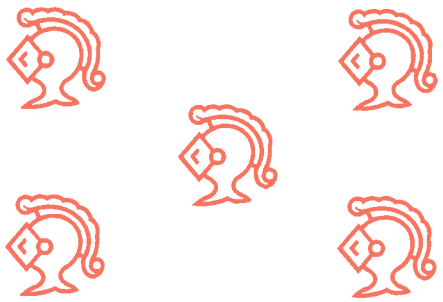
Count and Compare

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.

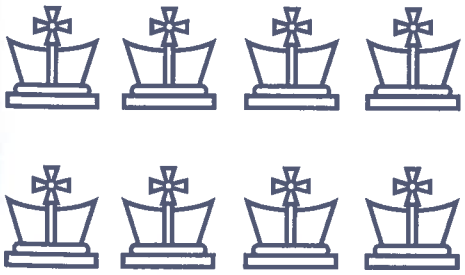




greater than less than equal than



greater than less than equal than



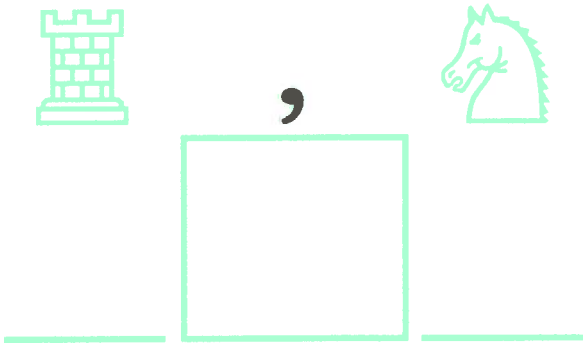
greater than less than equal than

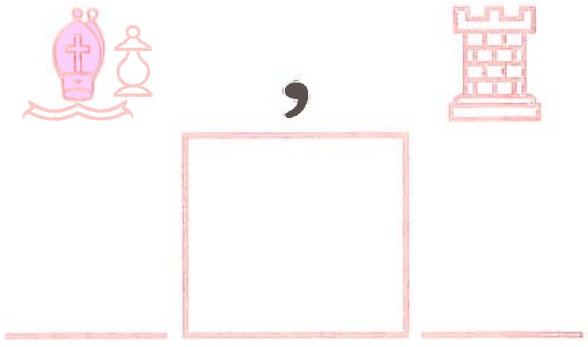
greater than less than equal than

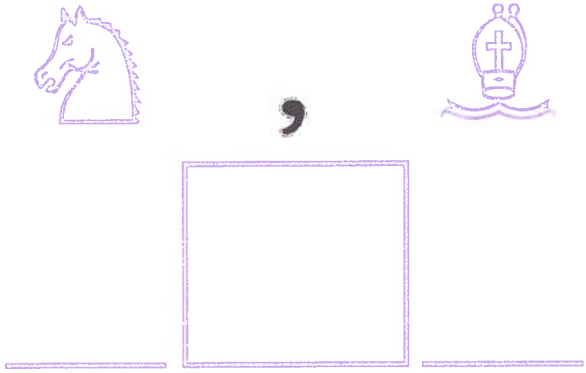
Name_____

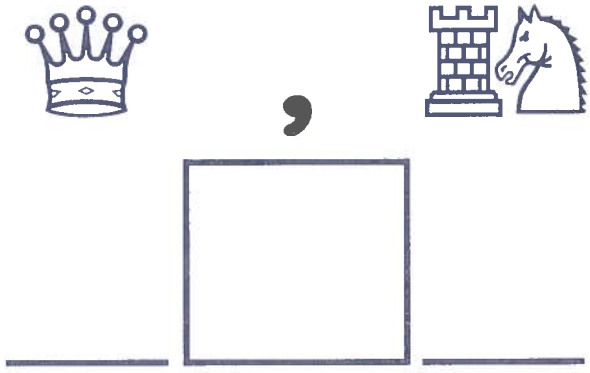
Lesson 2.7 Compare Numbers Up to 10

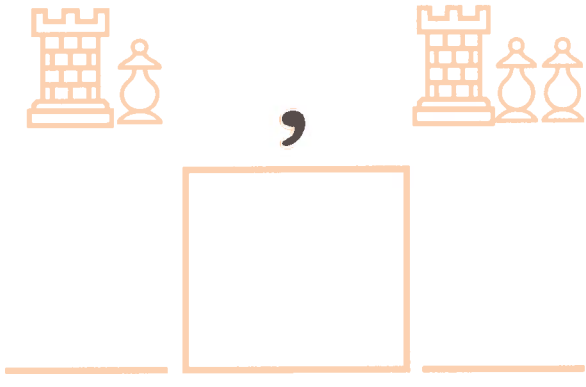
Write the numbers that represent the chess pieces below.
Then compare, and write in the box <, >, =.

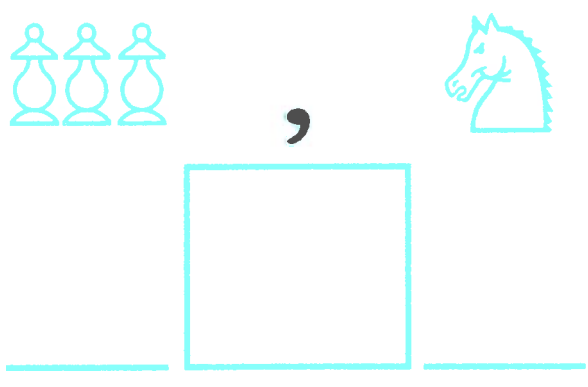








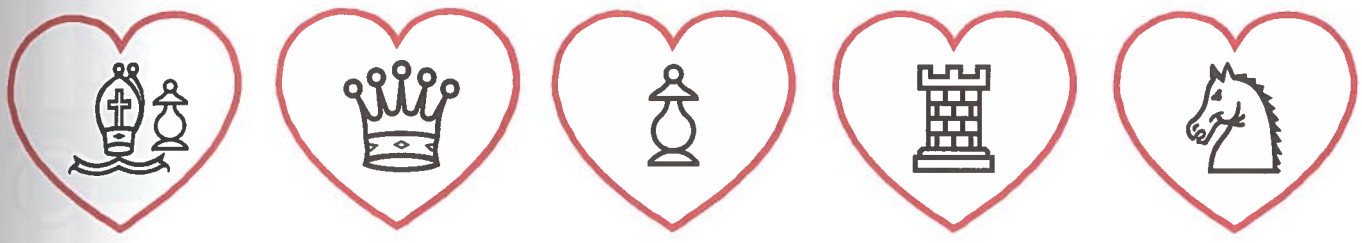


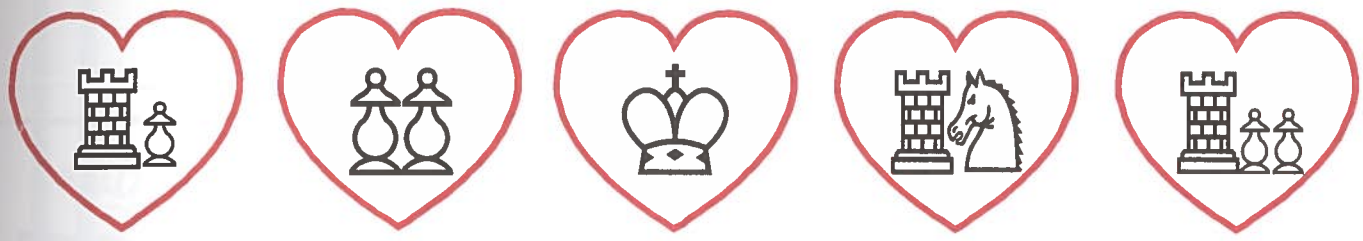


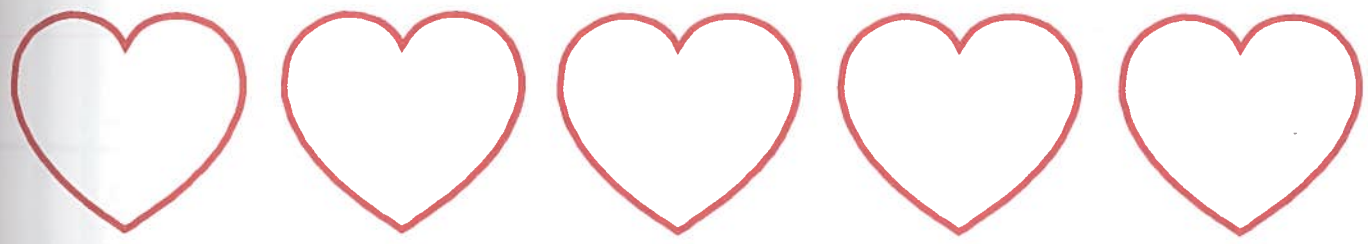
Name _____

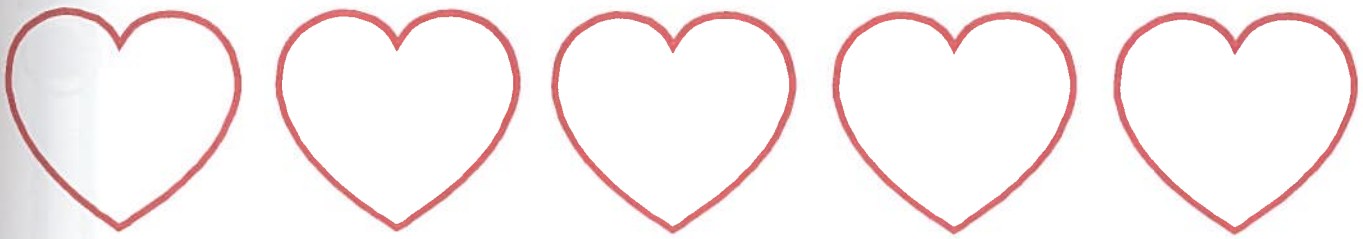
Number Order

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?





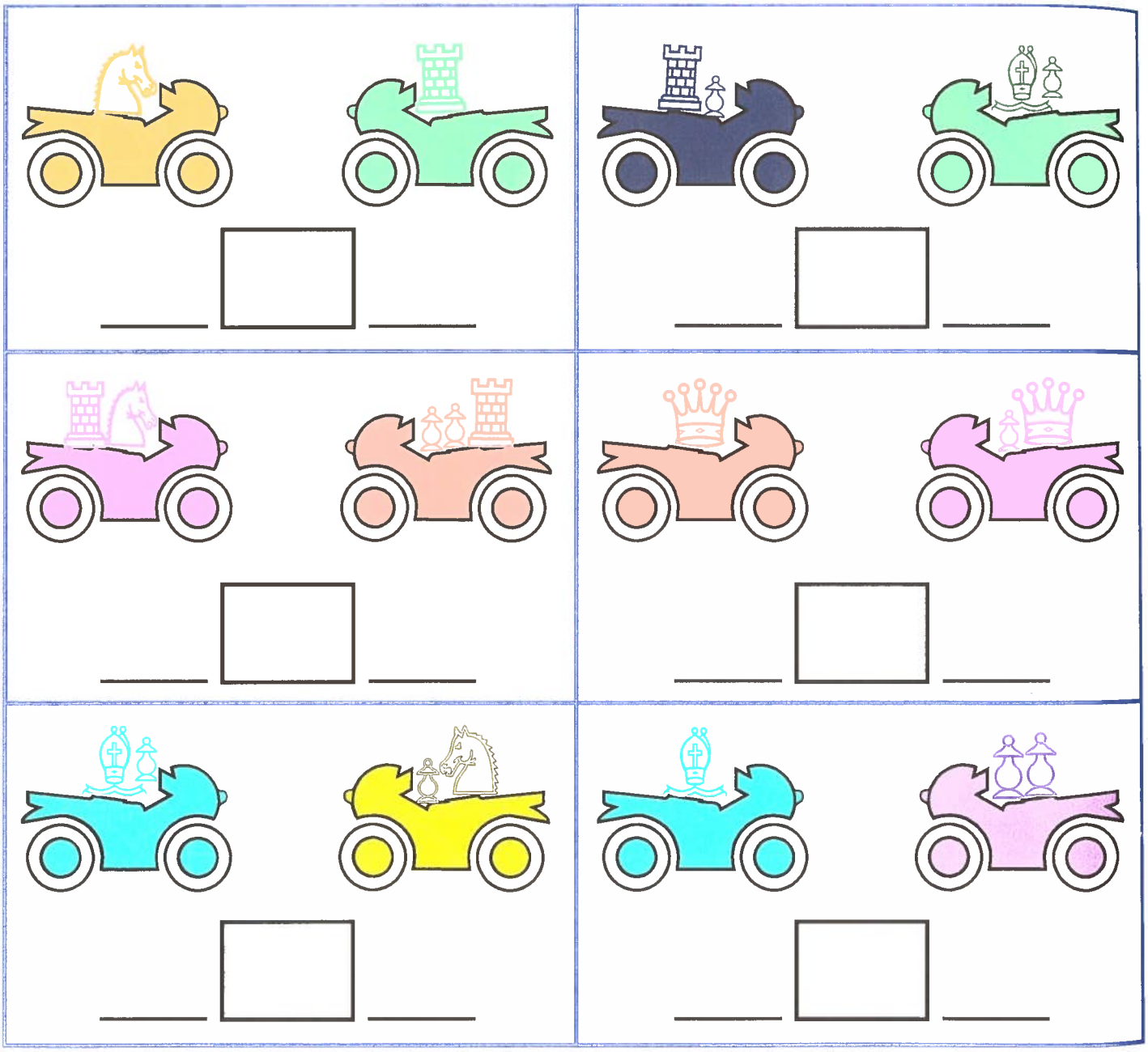




Name_____

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 <, >, =.



CONGRATULATIONS

LEVEL ♙♙ COMPLETED!

I know the name of the numbers and count sequence.

I can count to tell the number of objects.

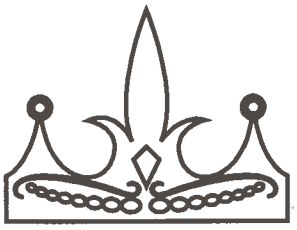
I can compare numbers using chess pieces.

I can recall the number value of the chess pieces.

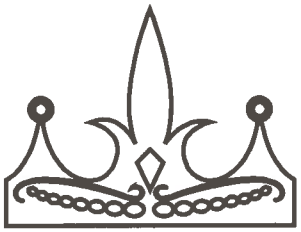
I can use the chess number line to count numbers in order.

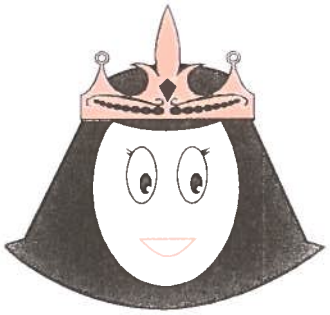
I can use the chess dominoes to recall numbers.

I know how to move the chess king.



CHESS 4 MATH

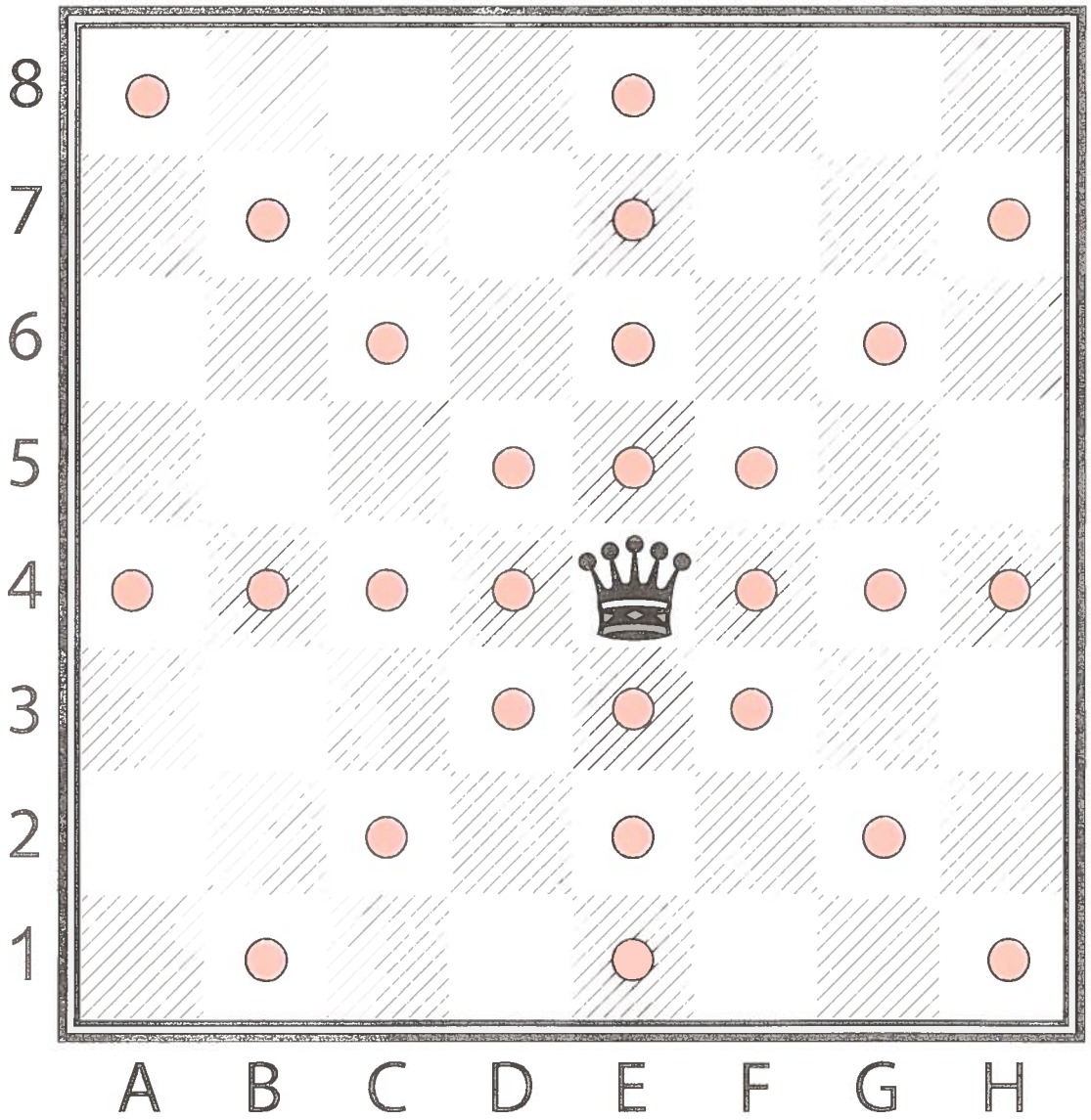




The Queen

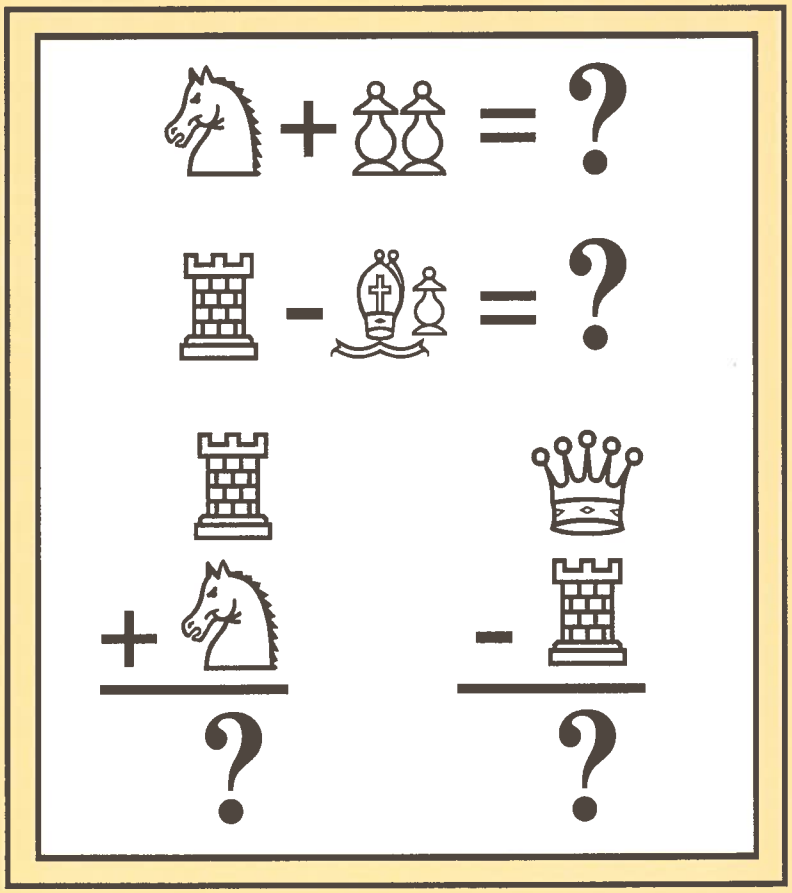
Hello friends!

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



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

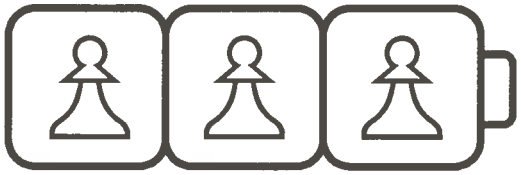
Name_____

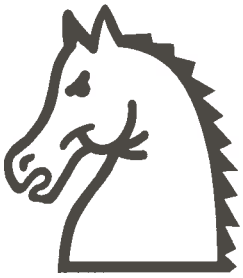
Lesson 3.1 Pair of Numbers: 3

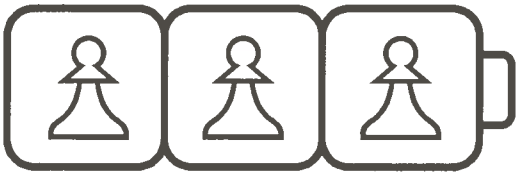
Common Core

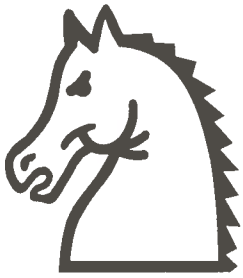
K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.4, K.OA.A.5 MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8.

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





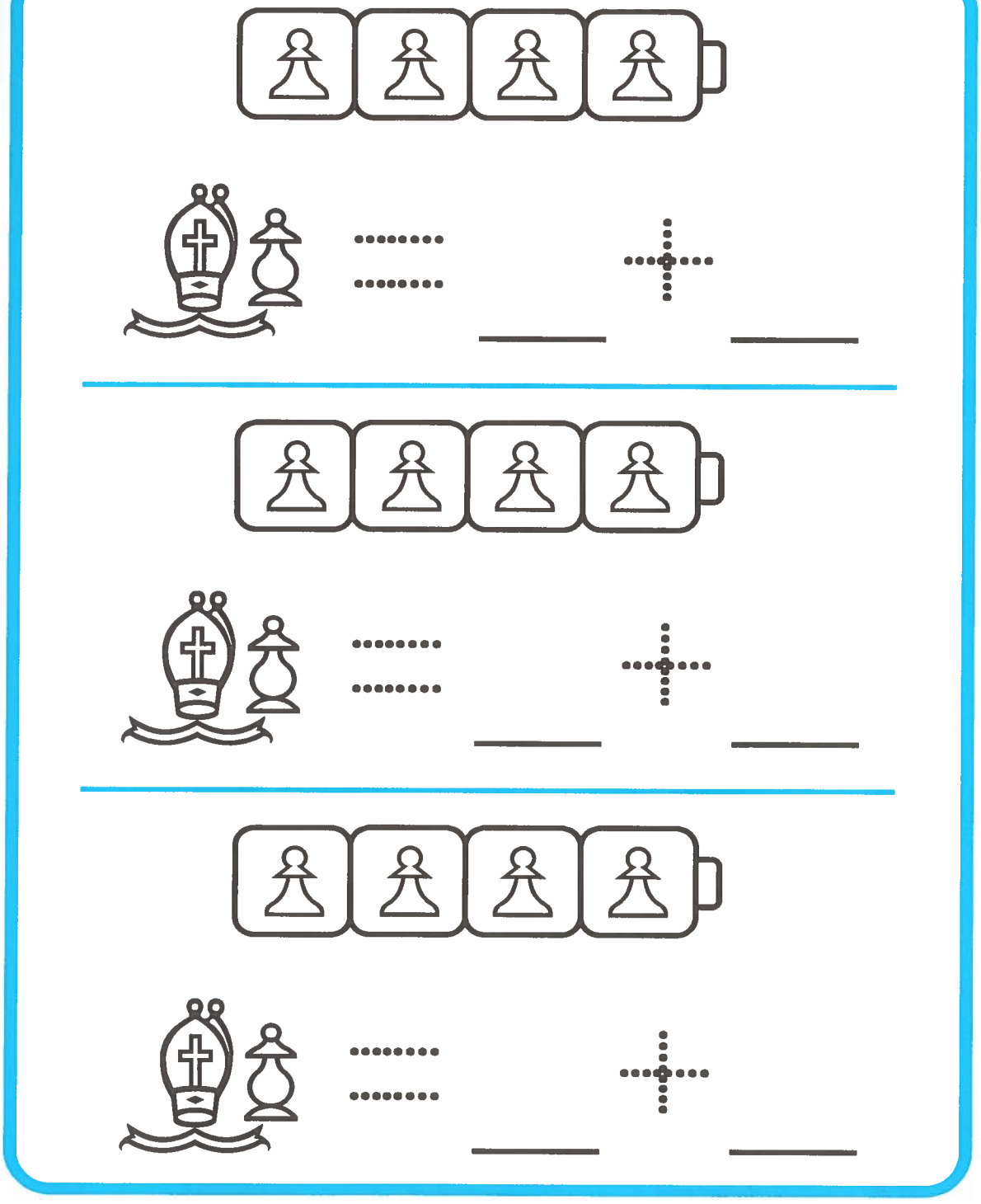




Name _____

Pair of Numbers: 4

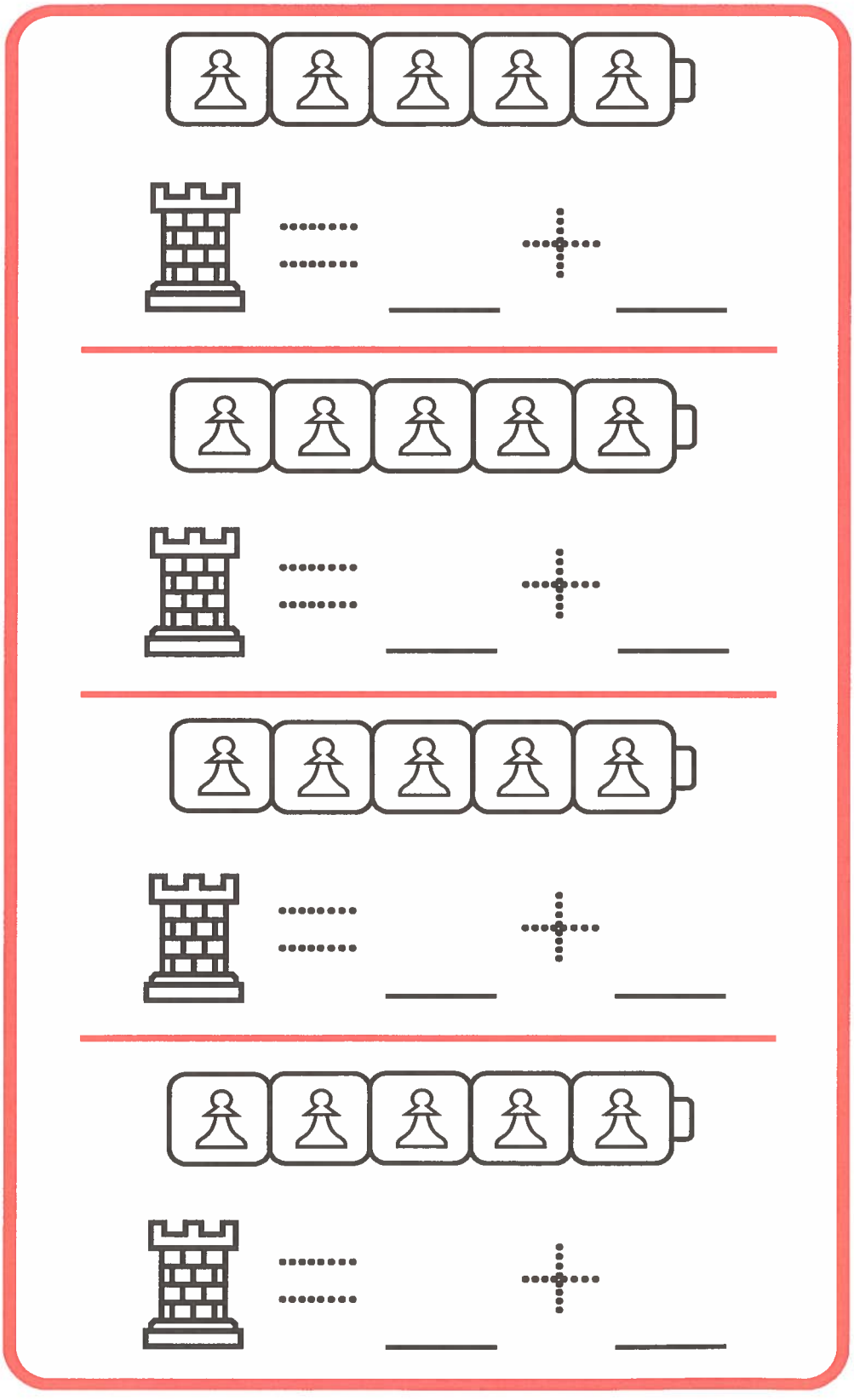
Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



Name_____

Pair of Numbers: 5

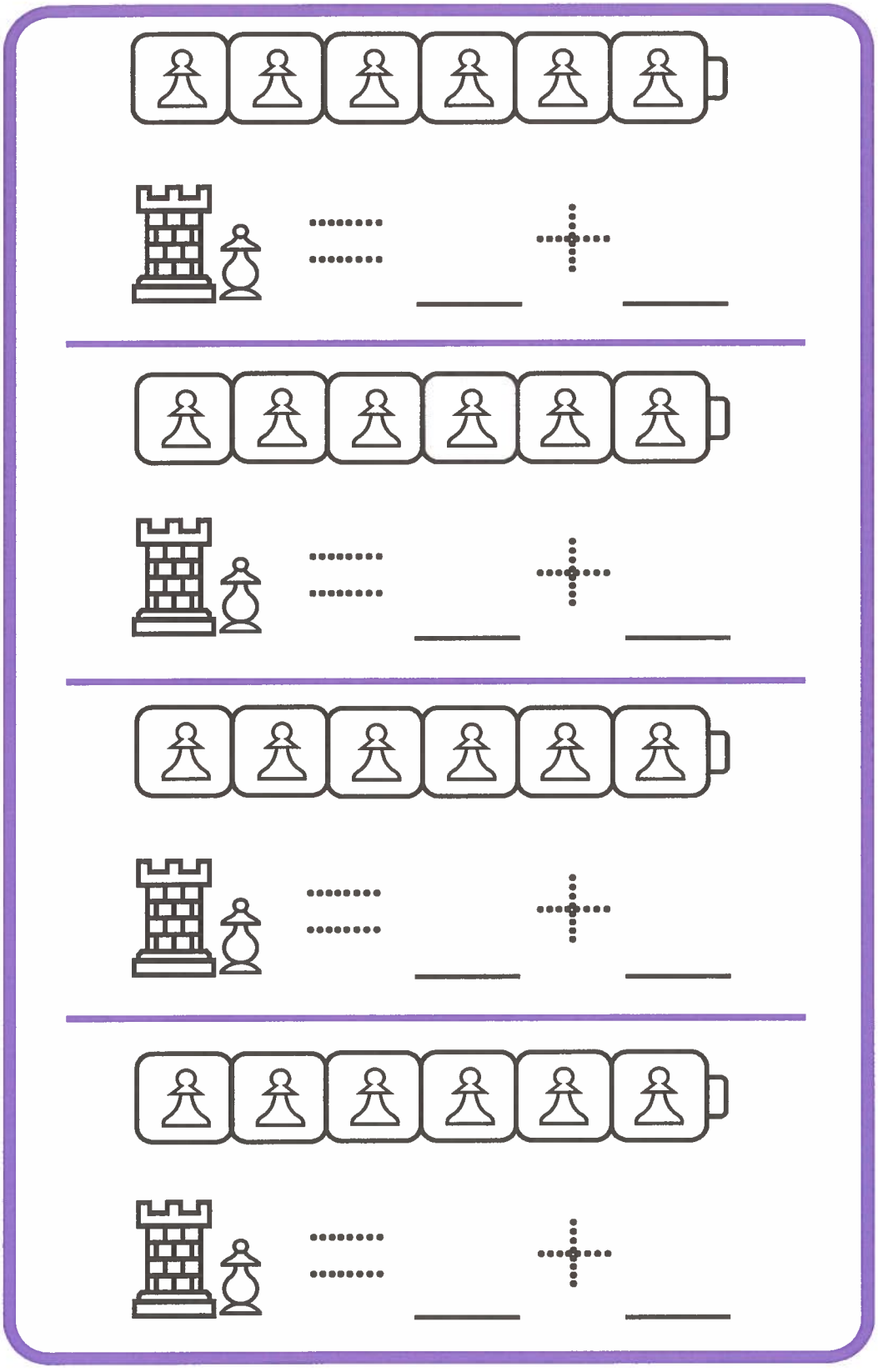
Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.



Name _____

Lesson 3.2 Pair of Numbers: 6

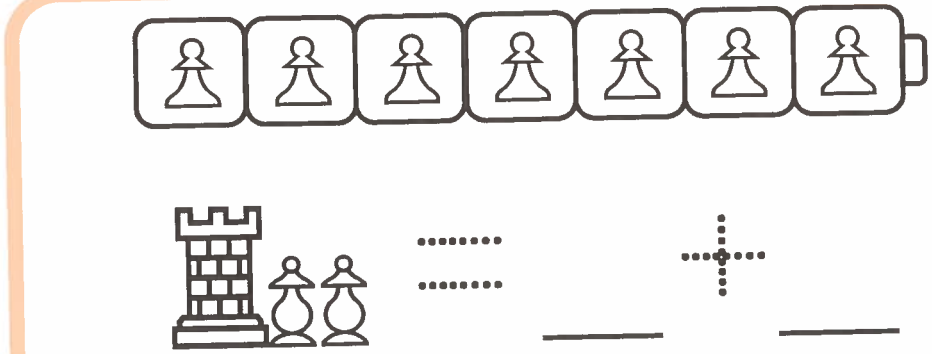
Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.

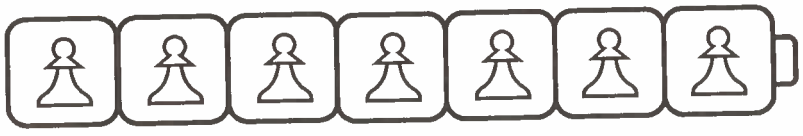


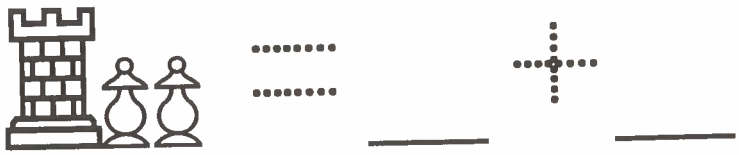
Name_____

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.



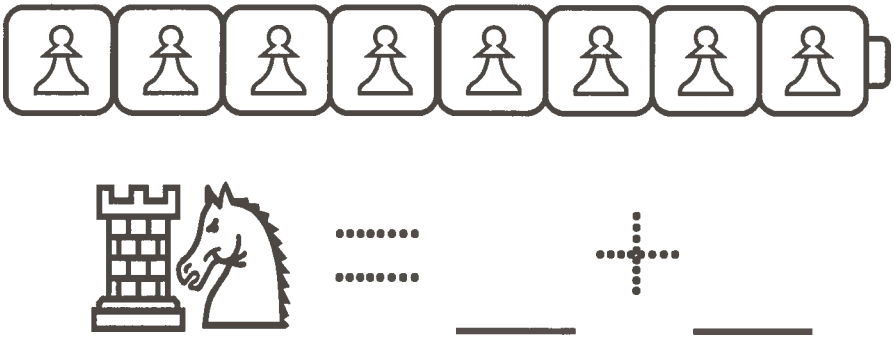


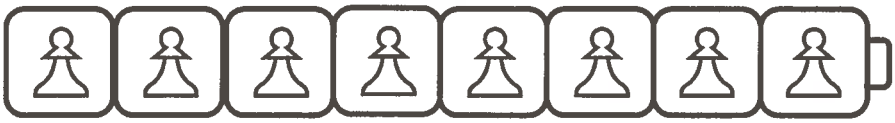


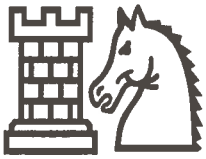
Name _____

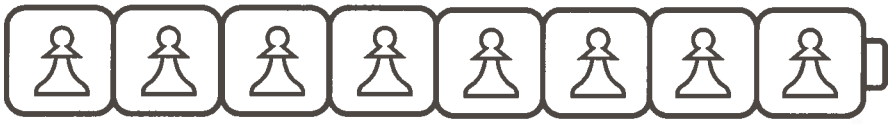
Pair of Numbers: 8

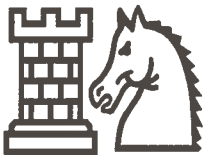
Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.

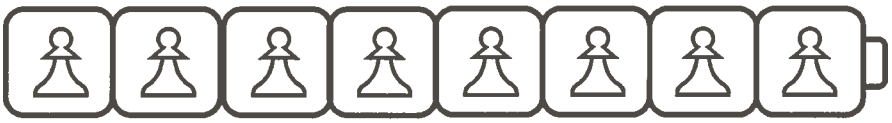


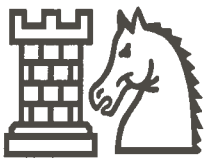






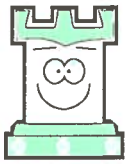




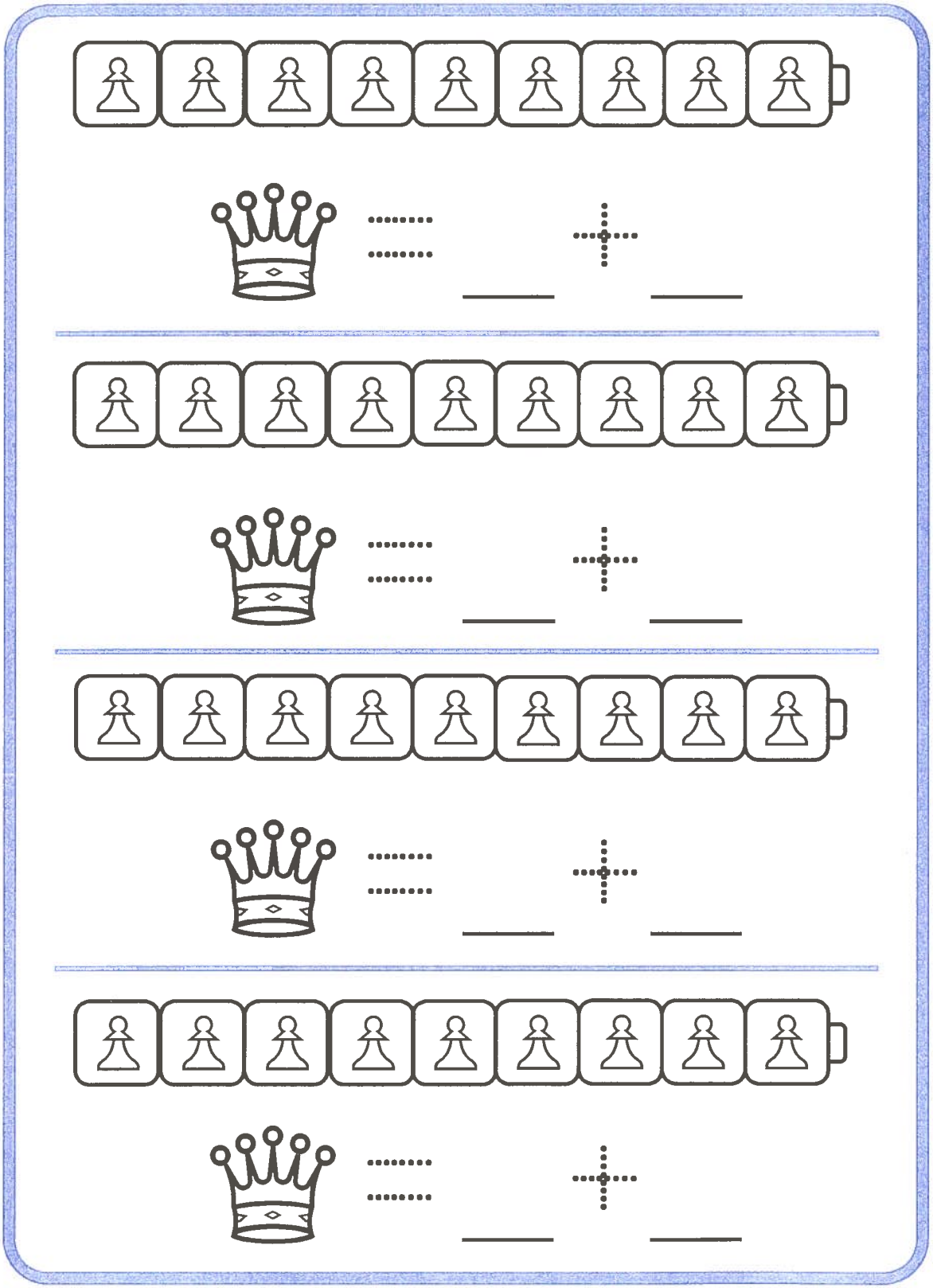


Name_____

Pair of Numbers: 9



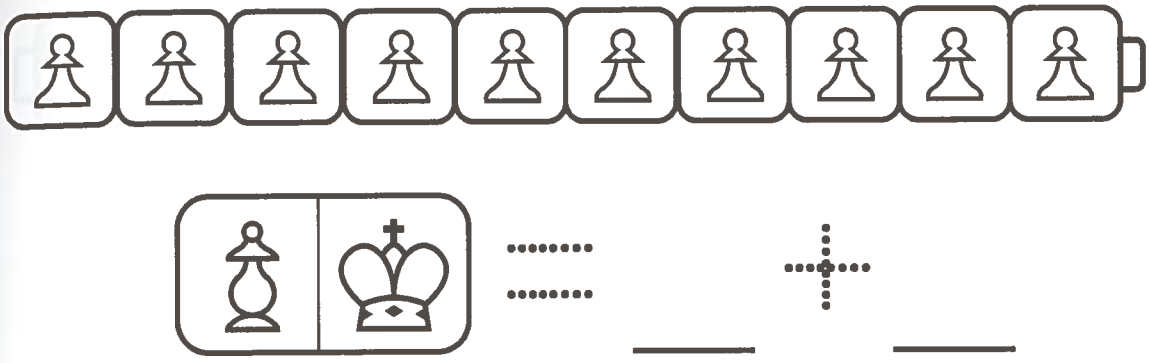
Color the cubes using one or two colors to show the pair of numbers that make the equation right. Write the number sentence.

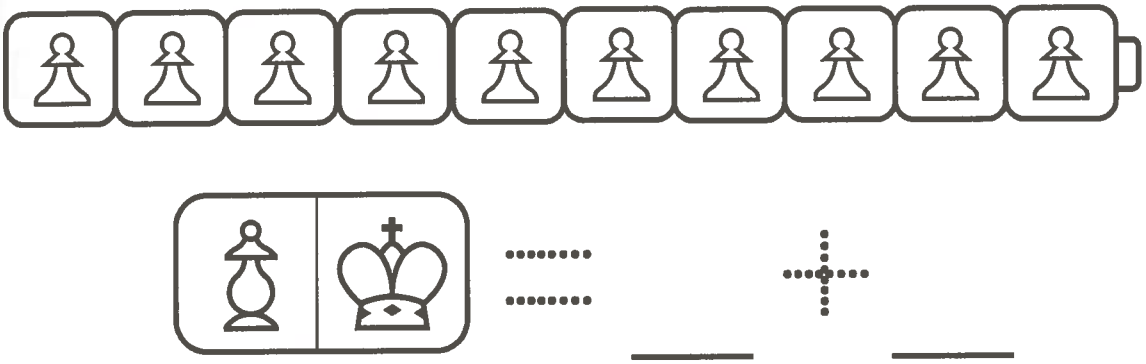


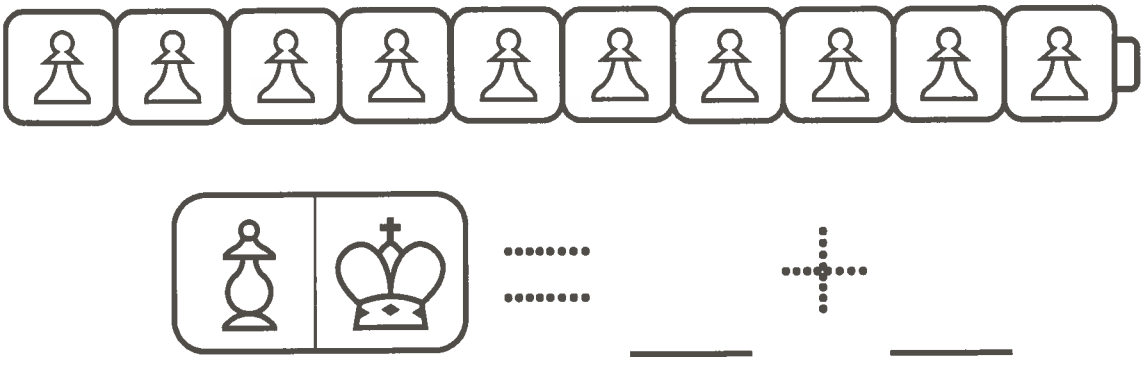
Name _____

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.



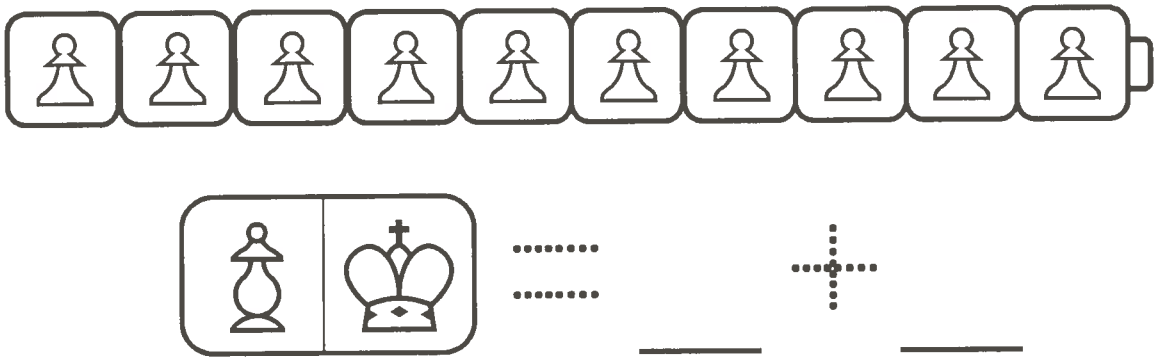


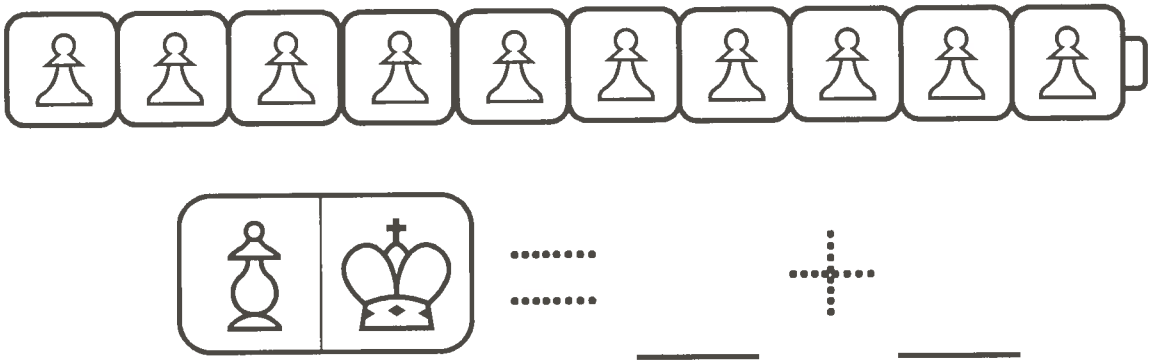


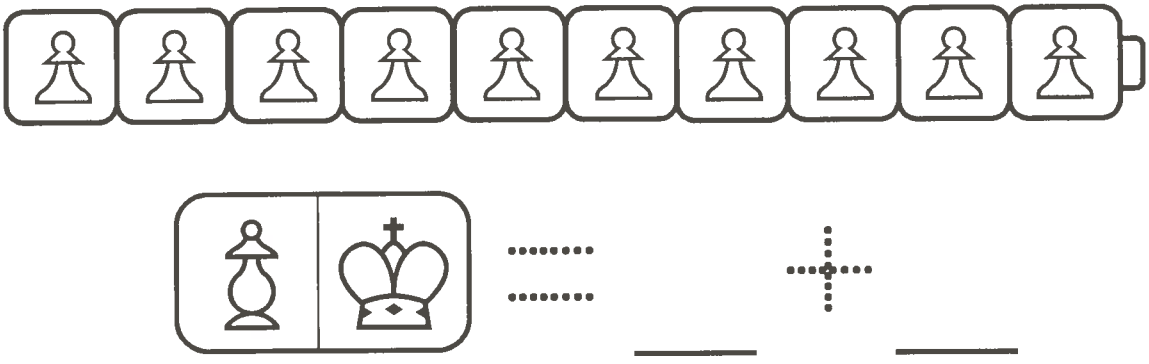
Name_____

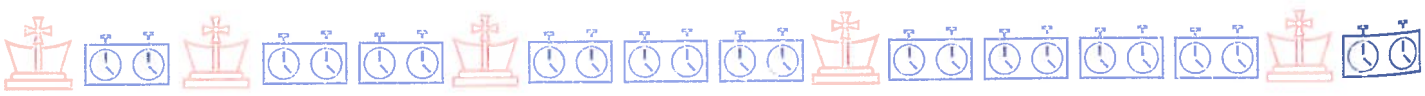
Pair of Numbers: 10

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





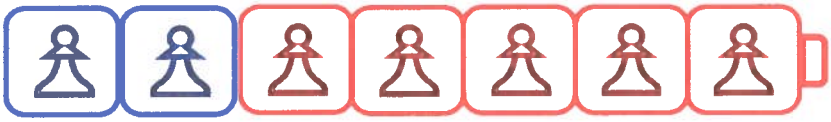




Name _____

Lesson 3.4 Practice with Pair of Numbers

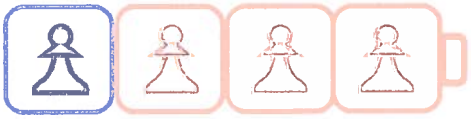
Write the number sentence that is related to the chess cubes.



Name_____

Practice with Pair of Numbers I

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



_____ + _____ = _____

_____ + _____ = _____

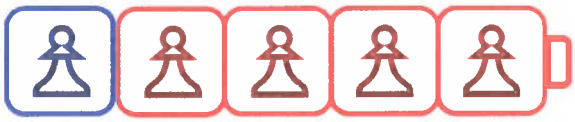
_____ + _____ = _____

_____ + _____ = _____

Name _____

Practice with Pair of Numbers II

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

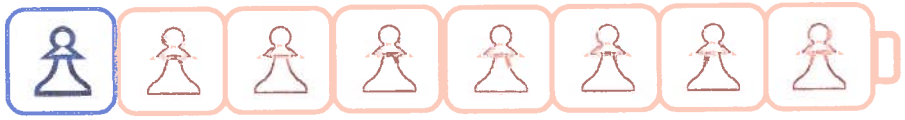


Name_____

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.

_____ _____ _____

_____ _____ _____

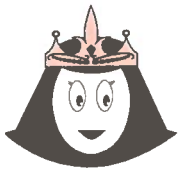
_____ _____ _____

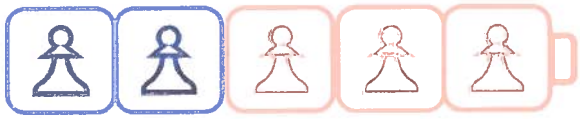
_____ _____ _____

Name_____

Practice with Pair of Numbers V

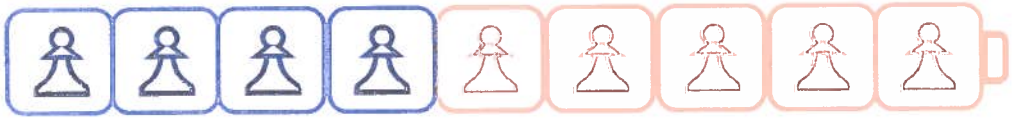
Write the number sentence that is related to the chess cubes.





____ + ____ = ____

____ + ____ = ____



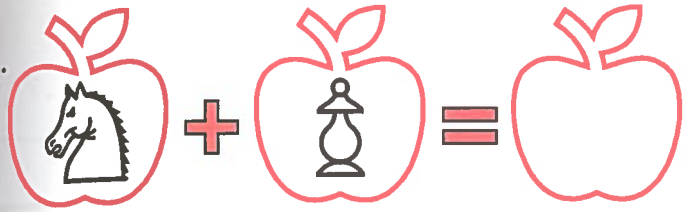
____ + ____ = ____

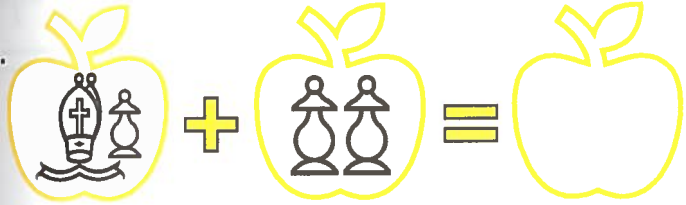
____ + ____ = ____

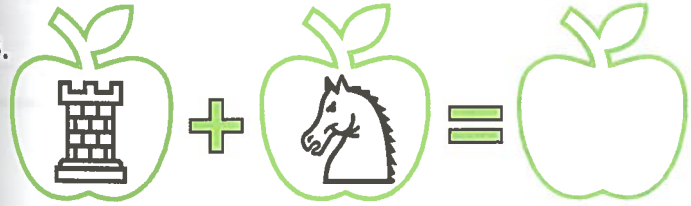
Name _____

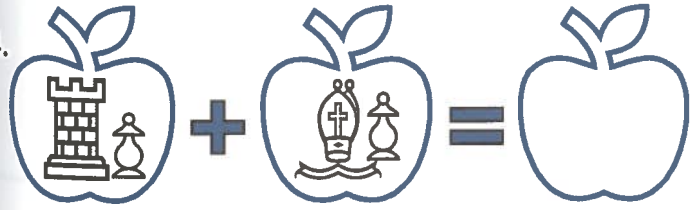
Lesson 3.5 Apple Addition

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.

1. 

2. 

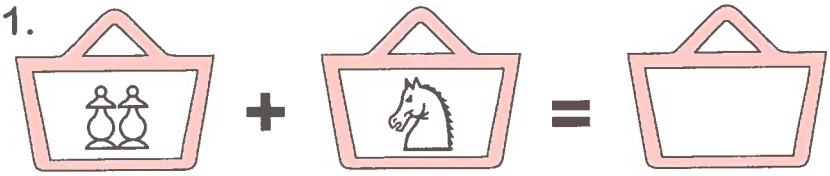
3. 

4. 

Name_____

Addition Practice

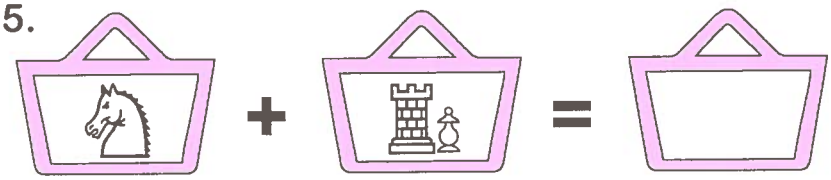
Using the chess number line add the pieces inside the baskets and write the number sentences on the right.

1.  _____ + _____ = _____

2.  _____ + _____ = _____

3.  _____ + _____ = _____

4.  _____ + _____ = _____

5.  _____ + _____ = _____

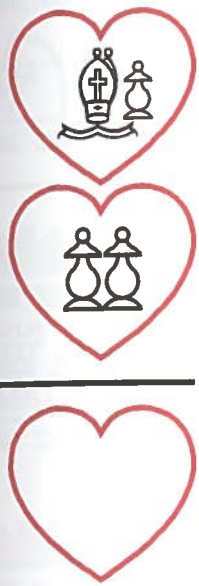
6.  _____ + _____ = _____

Name _____

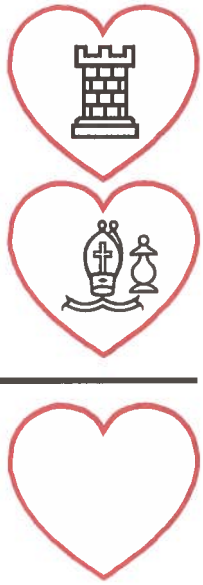
Heart Addition Practice

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

1.

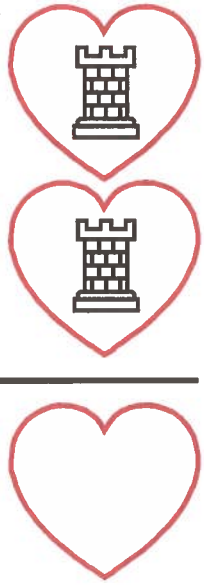


2.



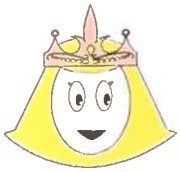
3.

4.

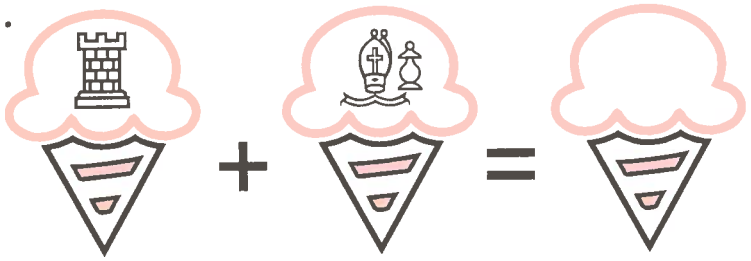


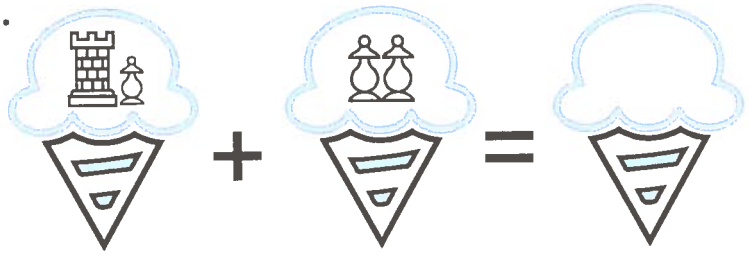
Name_____

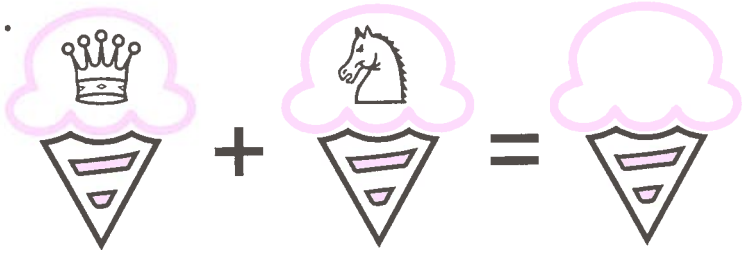
Ice Cream Addition Practice

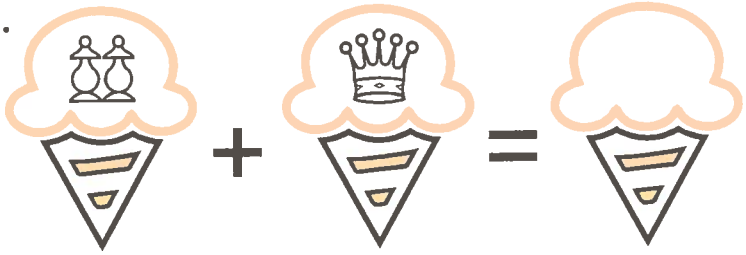


Using the chess number line add the ice cream and write the number sentences on the right.

1.  _____ + _____ = _____

2.  _____ + _____ = _____

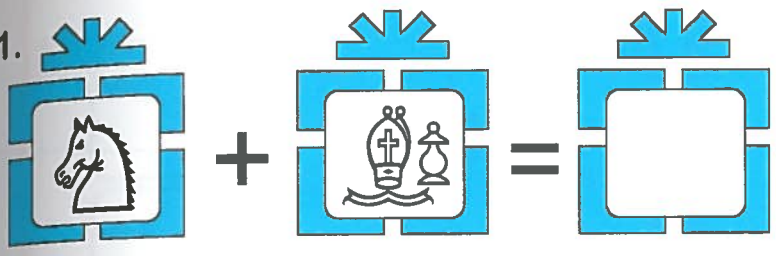
3.  _____ + _____ = _____

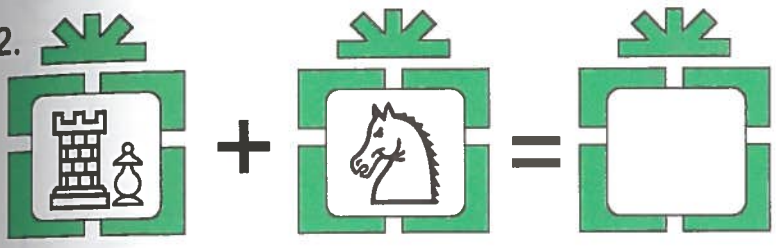
4.  _____ + _____ = _____

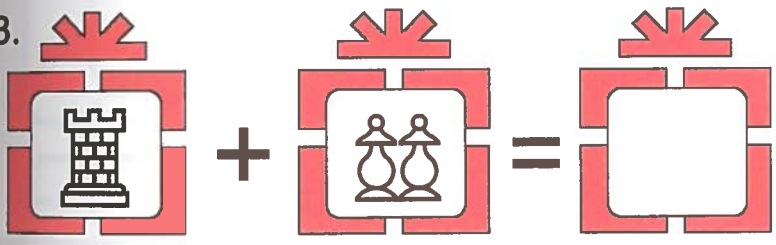
Name _____

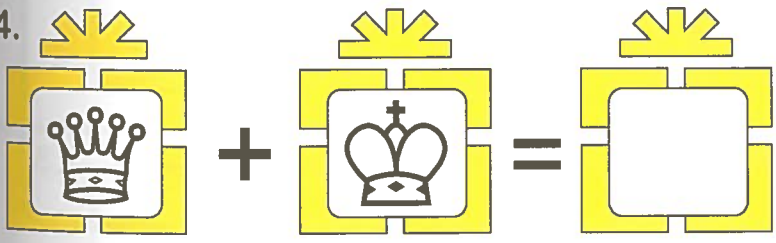
Lesson 3.6 Chess Presents Addition Practice

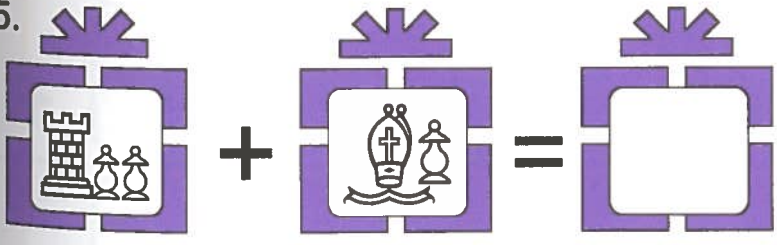
Use addition to find out how many presents we have for the party.
Write the number sentence on the right.

1.  _____ + _____ = _____

2.  _____ + _____ = _____

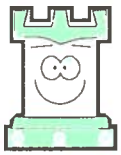
3.  _____ + _____ = _____

4.  _____ + _____ = _____

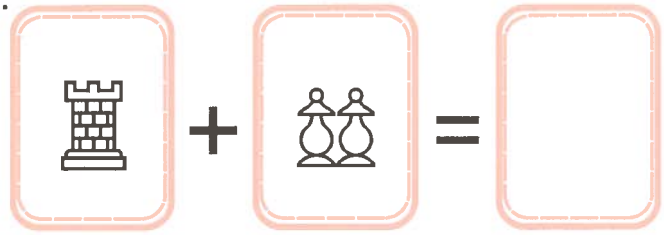
5.  _____ + _____ = _____

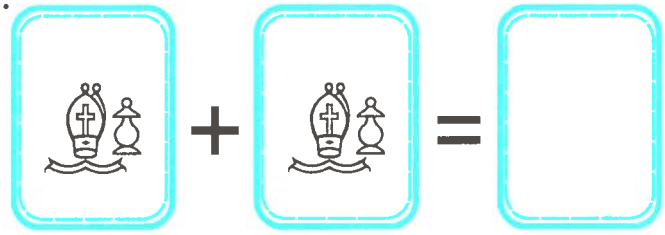
Name_____

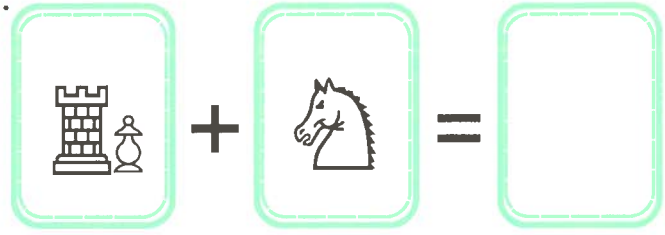
Chess Cards Addition Practice

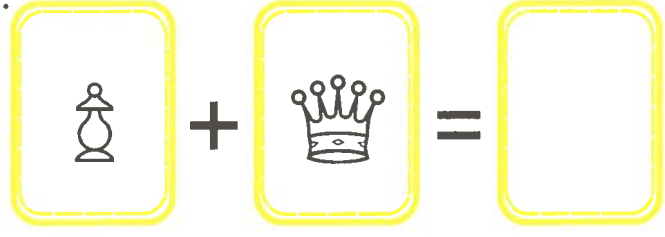


Use the chess number line to add the cards. Draw circles on the right to represent the addition problem. Write the number sentence below each exercise.

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.


2.


3.


4.

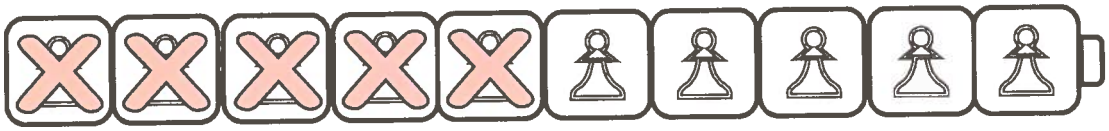

5.

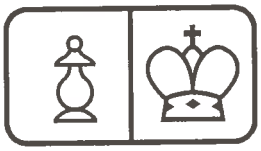

6.


Name_____

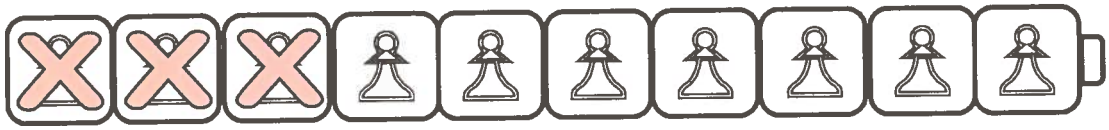
Lesson 3.7 Subtracting to 10

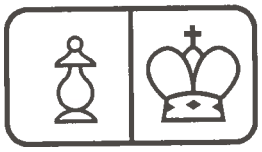
Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?



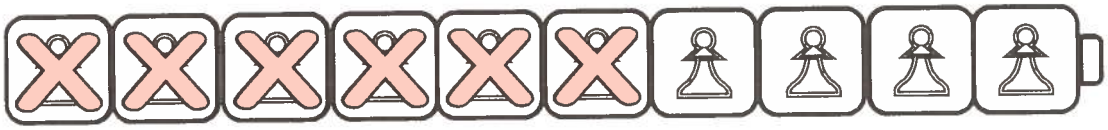


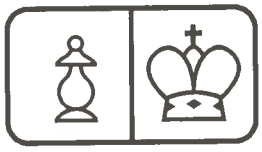
..... _____ ..... _____



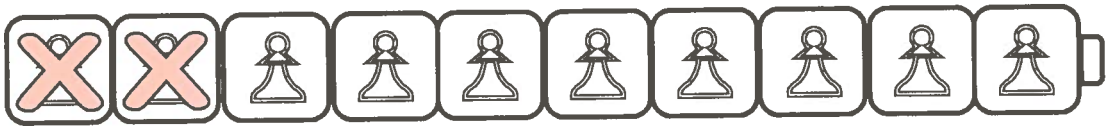


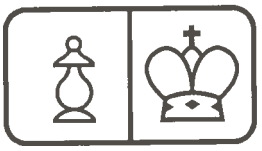
..... _____ ..... _____





..... _____ ..... _____



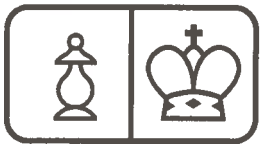


..... _____ ..... _____

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?



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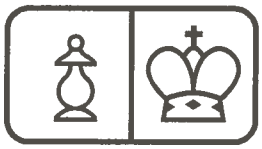
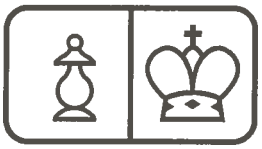


..... _____ .....
..... _____



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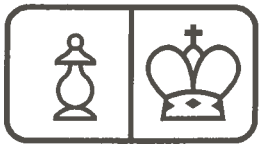
..... _____

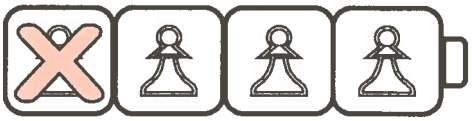


..... _____ .....
..... _____

Name_____

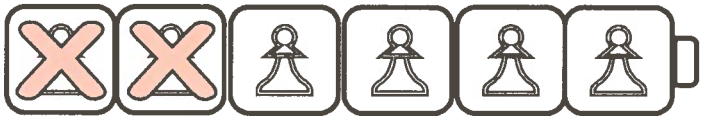
Lesson 3.8 Subtraction Practice with Chess Cubes I

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?



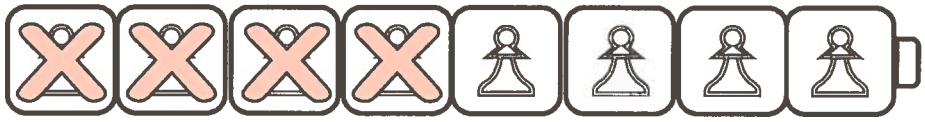
•••••••• ••••••••
••••••••

_____ _____ _____



•••••••• ••••••••
••••••••

_____ _____ _____



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_____ _____ _____

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••••••••

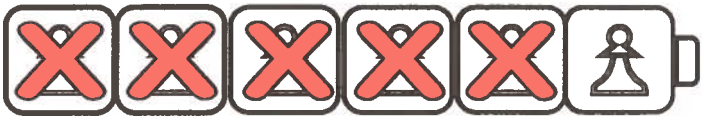
_____ _____ _____

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?

_____ •••••••• _____ ••••••••
•••••••• _____



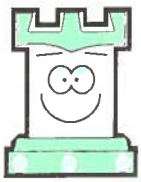
_____ •••••••• _____ ••••••••
•••••••• _____

_____ •••••••• _____ ••••••••
•••••••• _____

_____ •••••••• _____ ••••••••
•••••••• _____

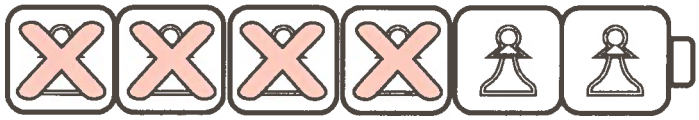
Name_____

Subtraction Practice with Chess Cubes III

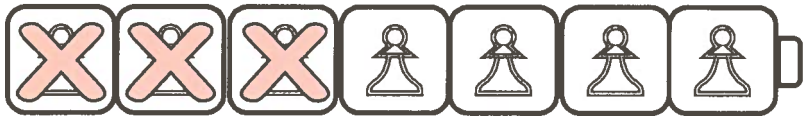


Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?

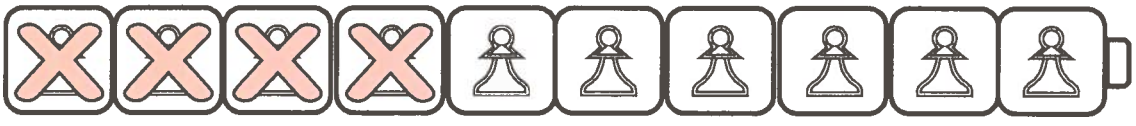
_____ •••••••• ••••••••
••••••••
_____ _____ _____



_____ •••••••• ••••••••
••••••••
_____ _____ _____



_____ •••••••• ••••••••
••••••••
_____ _____ _____



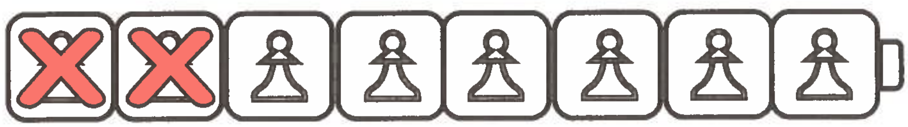
_____ •••••••• ••••••••
••••••••
_____ _____ _____

Name____

Subtraction Practice with Chess Cubes IV

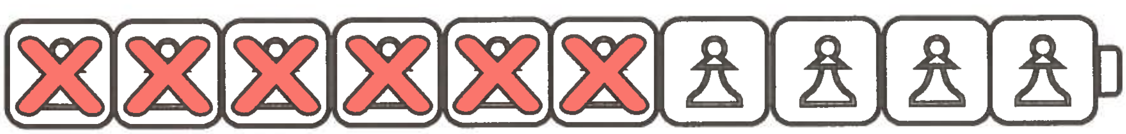
Answer the following questions, and use the information obtained with the chess cubes to complete the equations. How many cubes did we start with? How many cubes are crossed out? How many do we have left?

________ .... ________ .... ________



________ .... ________ .... ________

________ .... ________ .... ________

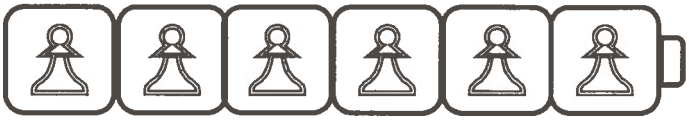


________ .... ________ .... ________

Name_____

Lesson 3.9 Chess Pieces Subtraction Practice I

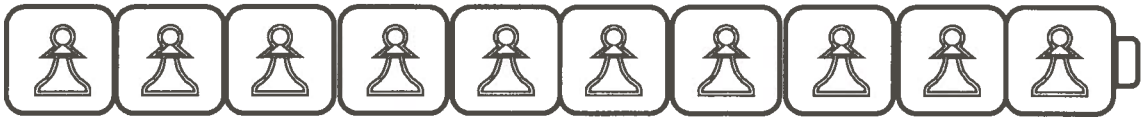
Complete the number sentence in each case. Cross out the cubes that are needed to subtract.



_____ .....  ..... _____

_____ ..... _____ ..... 

_____ .....  ..... _____



_____ ..... _____ ..... 

Name _____

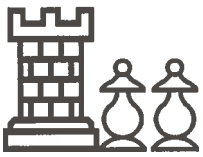
Chess Pieces Subtraction Practice II

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

_____ .....  ..... _____

_____ ..... _____ ..... 

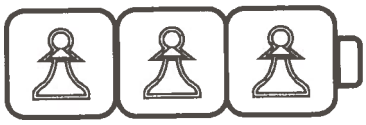
_____ .....  ..... _____

_____ ..... _____ ..... 

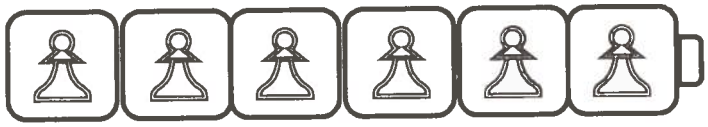
Name_____

Chess Pieces Subtraction Practice III

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

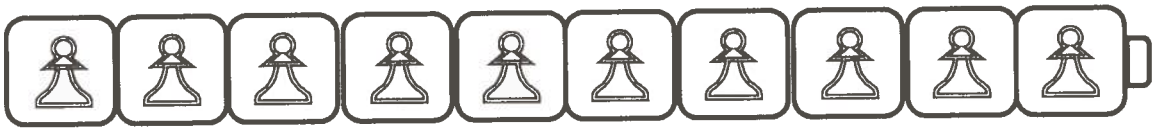


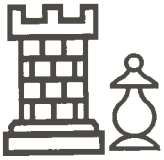
_____ .... _____



.... _____ _____

.... _____ _____





.... _____ _____

Name _____

Chess Pieces Subtraction Practice IV

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

_____ .... _____

_____ ..... _____ ....

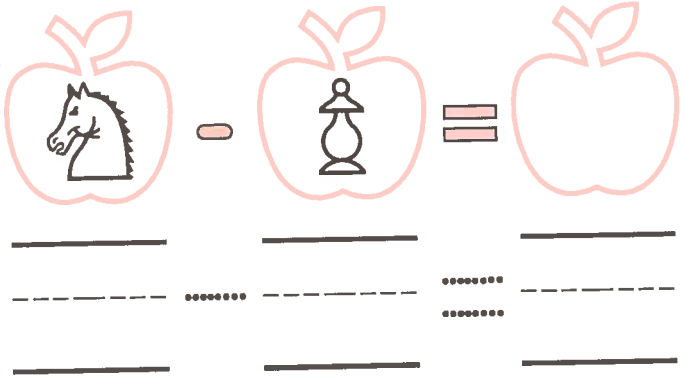
_____ .... _____

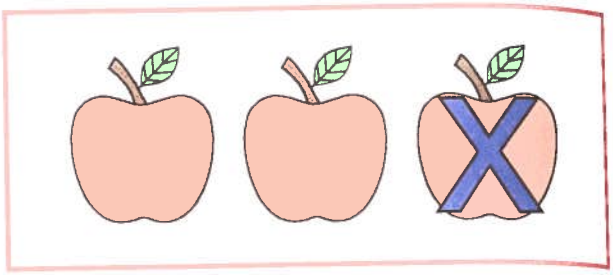
_____ ..... _____ ....

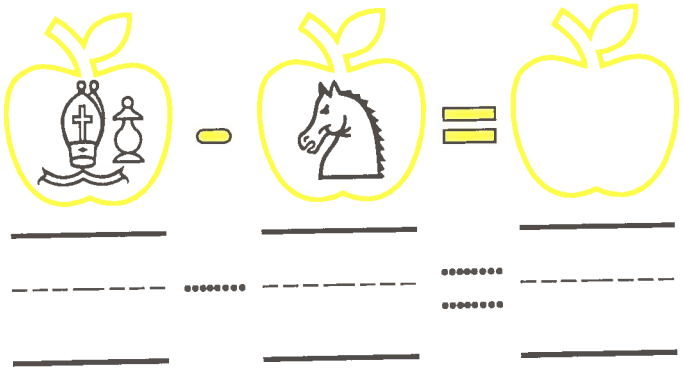
Name_____

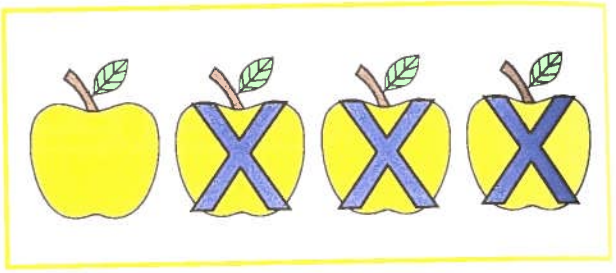
Lesson 3.10 Apple Subtraction Practice

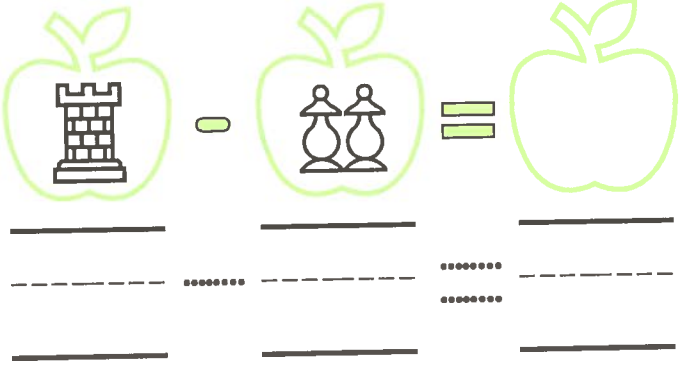
Use the chess number line and the pictures to subtract the chess apples.
Write the number sentence.

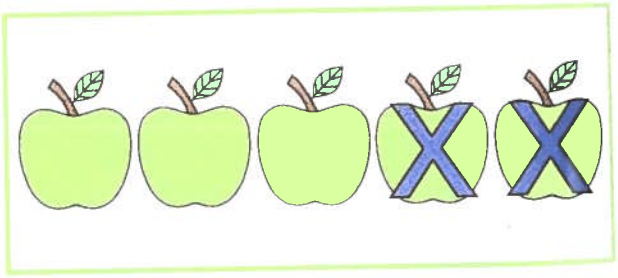
1. 

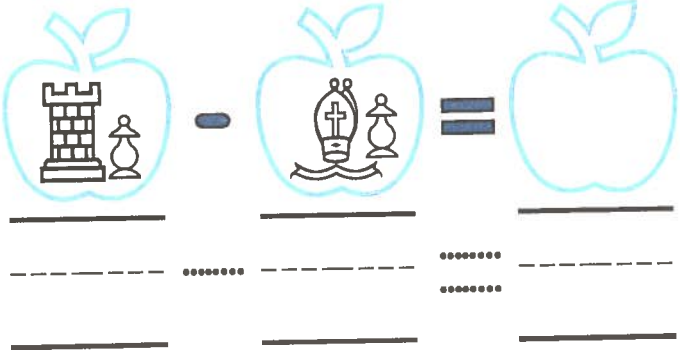


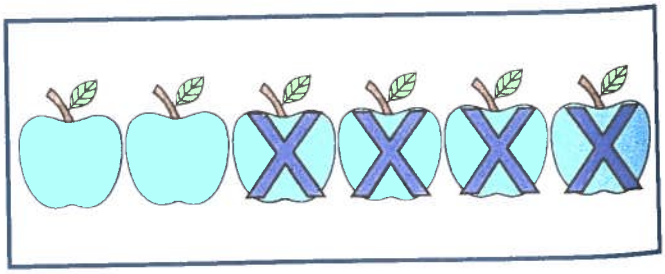
2. 



3. 



4. 



Name _____

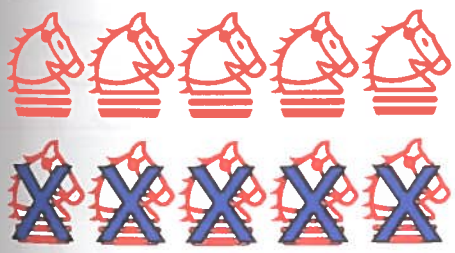
Set of Pieces Subtraction Practice

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

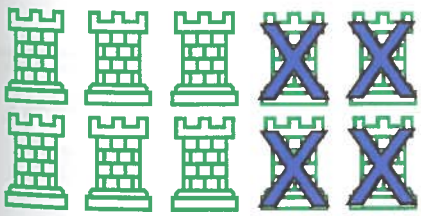
1.

2.

3.



4.

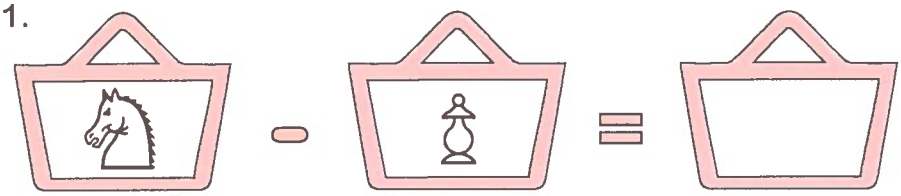


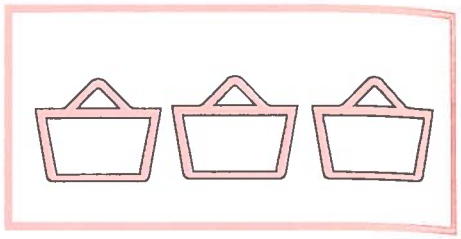
Name_____

Baskets Subtraction Practice

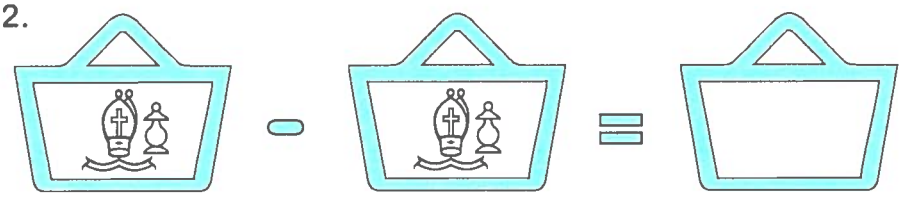
Solve the following equations, and cross out the number of baskets you need to subtract. How many do you have left? Write the answer in the empty basket. Write the number sentence.

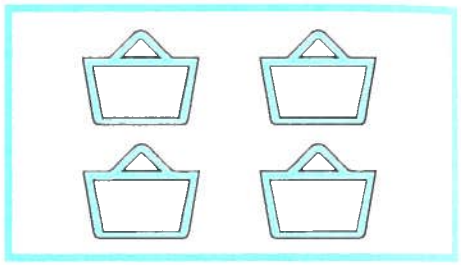
1.



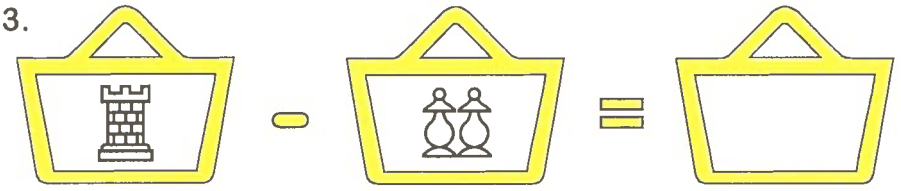


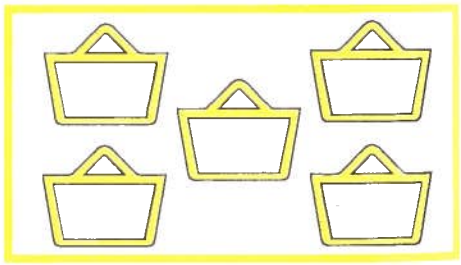
2.



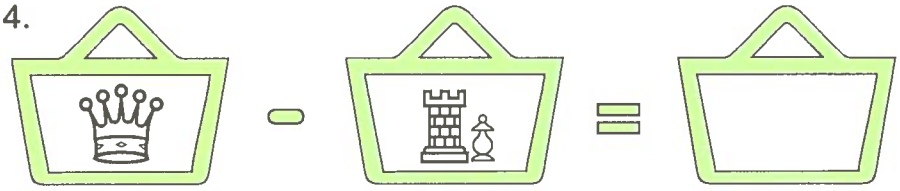


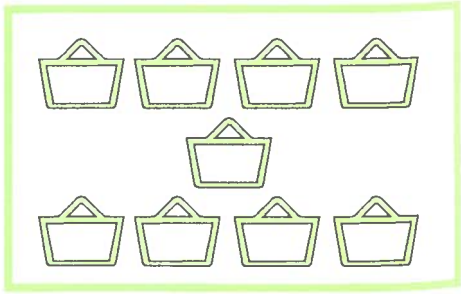
3.





4.



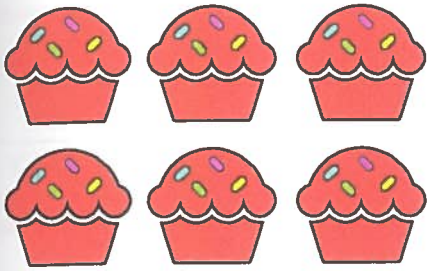


Name _____

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.



_____

_____

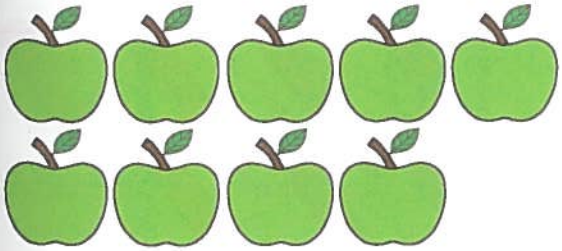
_____

2.

_____

_____

_____

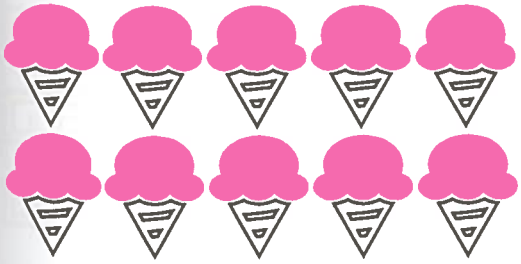


_____

_____

_____

4.



_____

_____

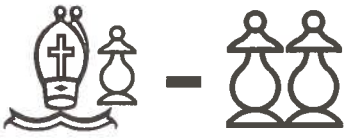
_____

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.

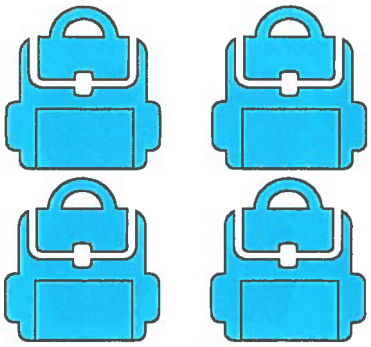
1.



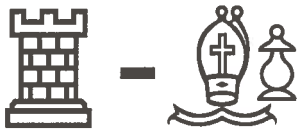
_____

_____

_____



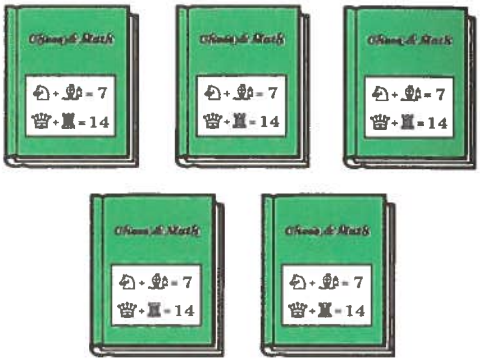
2.



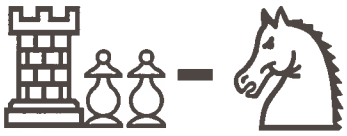
_____

_____

_____



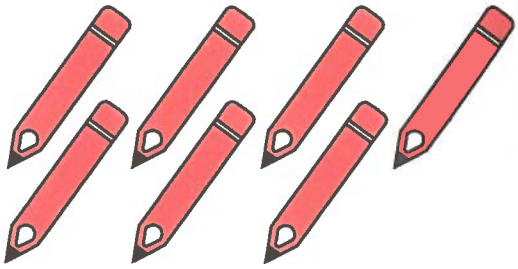
3.



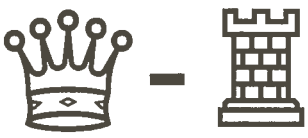
_____

_____

_____



4.



_____

_____

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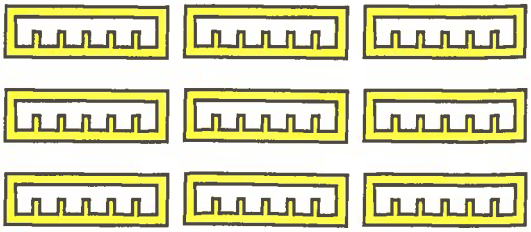
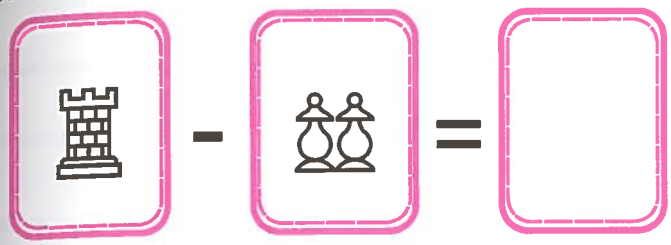
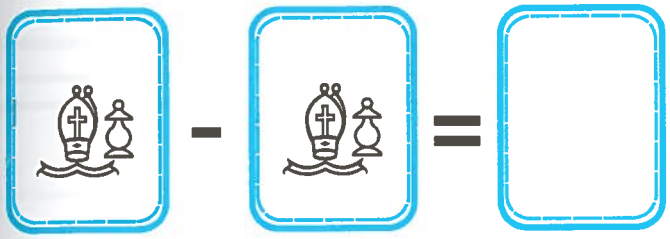


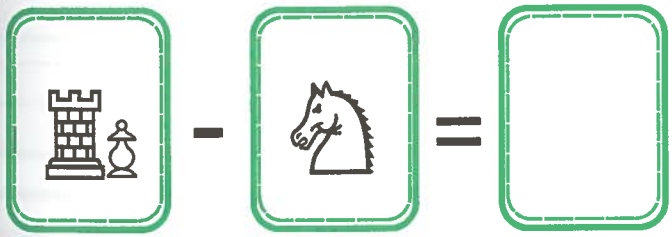
Name _____

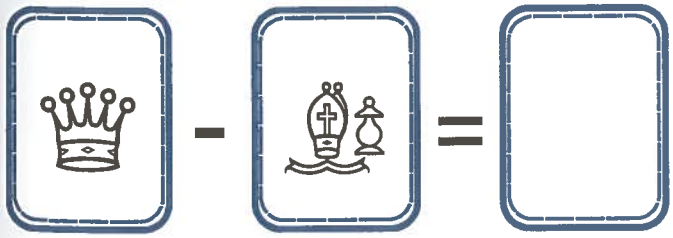
Chess Cards Subtraction Practice

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

1. 

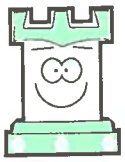
2. 

3. 

4. 

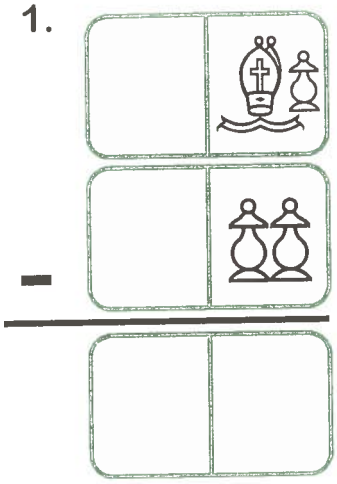
Name _____

Chess Domino Subtraction Practice

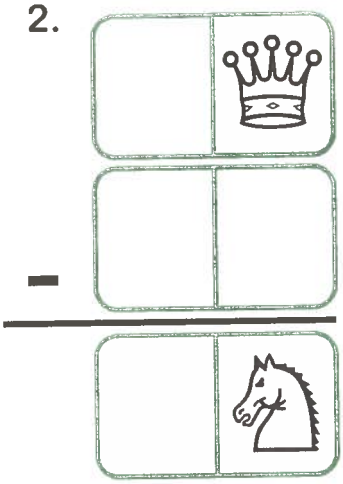


Use subtraction to find the solution in the following chess domino's equations. Fill in the blank with the missing number. Draw circles to show the equations in the blank space.

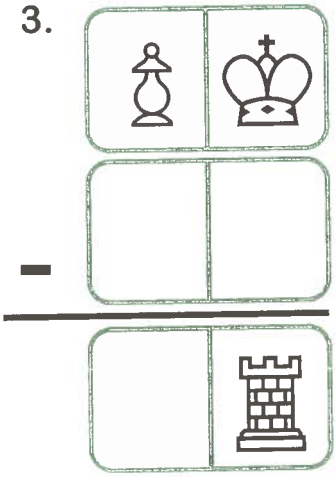
1.



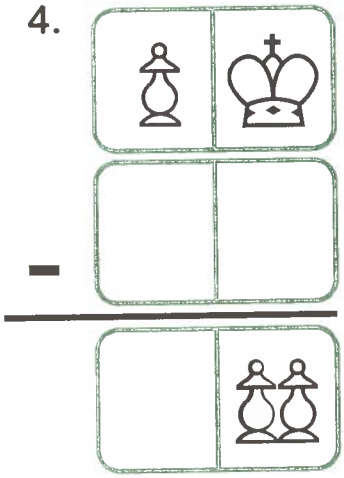
2.



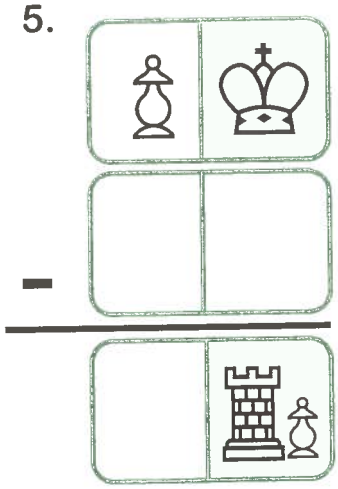
3.



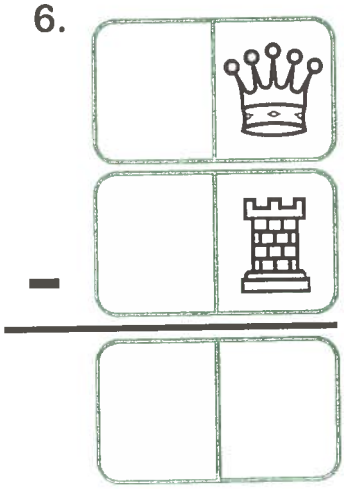
4.



5.



6.



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?

_____ + _____ = _____
_____ + _____ = _____
_____ + _____ = _____

She spent _____ dollars.

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

_____ - _____ = _____
_____ - _____ = _____
_____ - _____ = _____

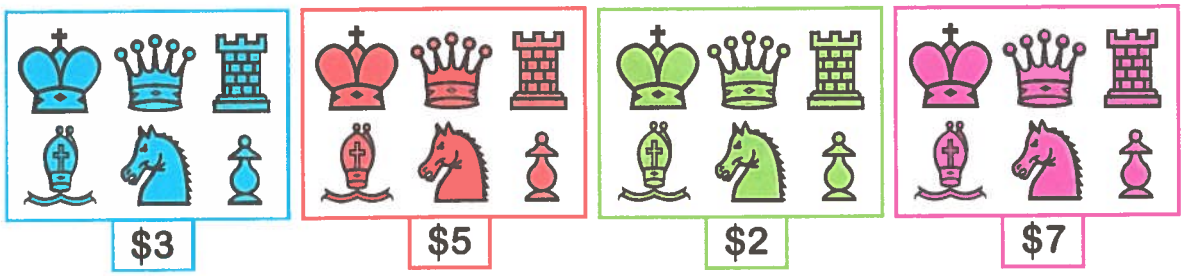
He has _____ dollar left.

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

_____ + _____ = _____
_____ + _____ = _____
_____ + _____ = _____

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?

_____ + _____ = _____

_____ + _____ = _____

_____ + _____ = _____

He spent _____ cents.

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

_____ + _____ = _____

_____ + _____ = _____

_____ + _____ = _____

She spent _____ cents.

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

_____ + _____ + _____ = _____

_____ + _____ + _____ = _____

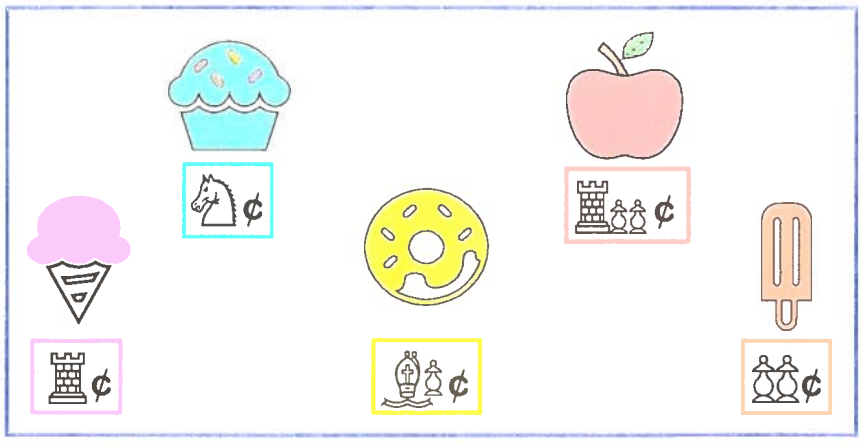
_____ + _____ + _____ = _____

_____ - _____ = _____

_____ - _____ = _____

_____ - _____ = _____

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_____

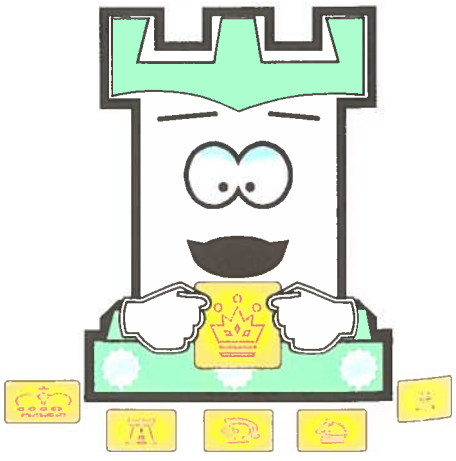
The Rookie Cookie Word Problem

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?

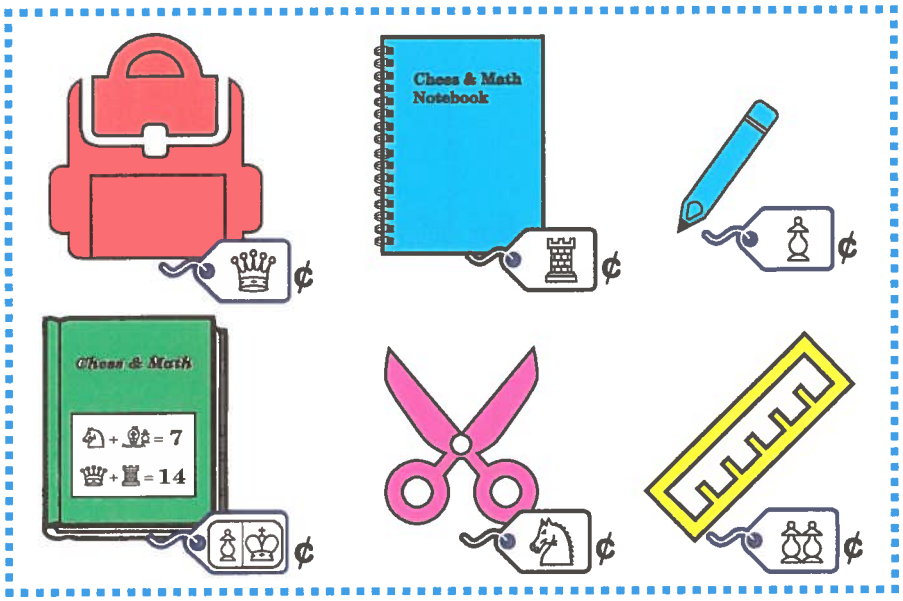
3. Lily had nine cookies in her bag. She found only four cookies. Her brother gave her three more cookies. How many cookies did the Rookie Cookie eat? How many cookies does she have now?



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?

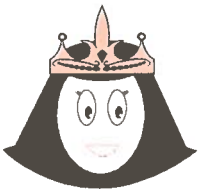
_____ ¢.

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?

_____ ¢.

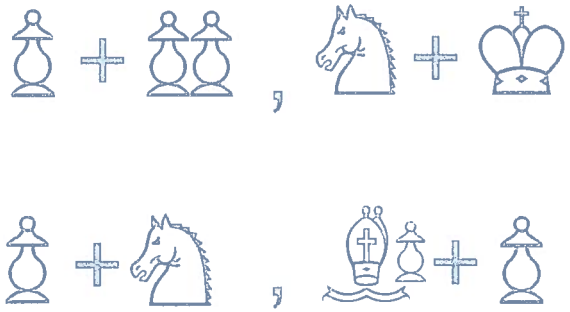
Name_____

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?

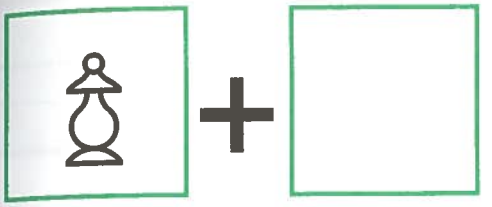
How do you make 9?

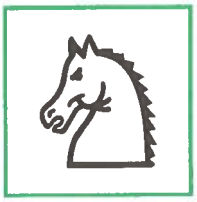
Name _____

Find the Missing Number

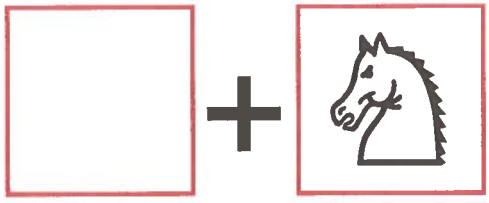
Identify the number represented by the chess pieces.
Fill in the missing numbers of each addition number bond.

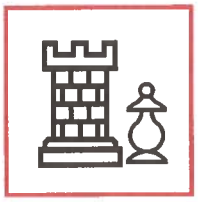
1.





2.





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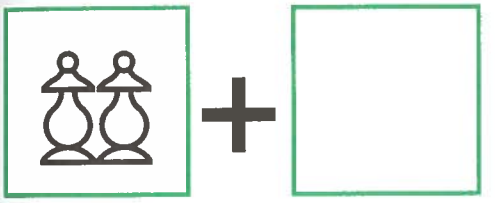

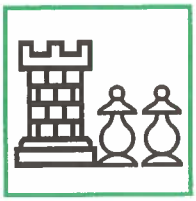

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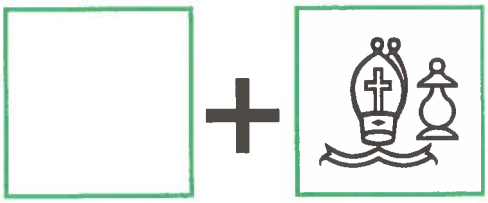

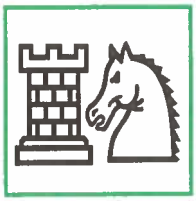

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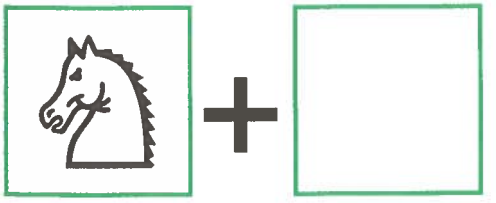
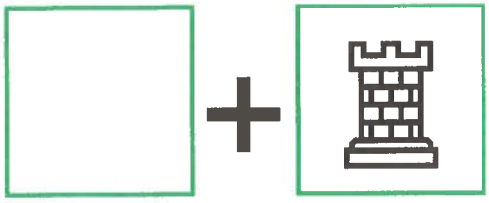
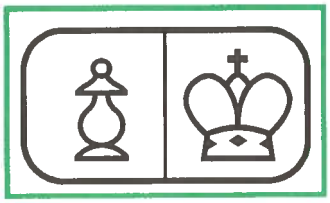


6.





Name_____

Coloring my Addition

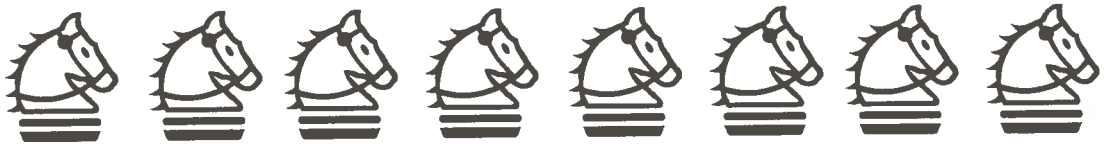
Follow the instructions below.

Color 4 pawns in blue.

How many white pawns are left? _____

Write the number sentence to represent the picture.

_____ + _____ = _____

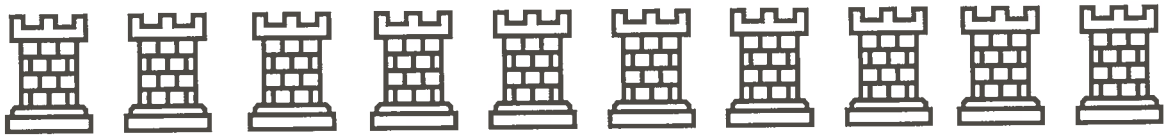


Color 3 knights in green.

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.

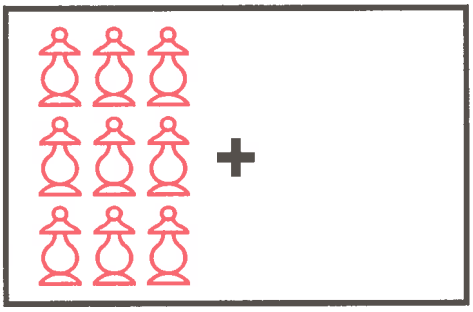
_____ + _____ = _____

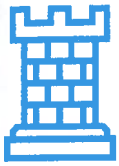
Name _____

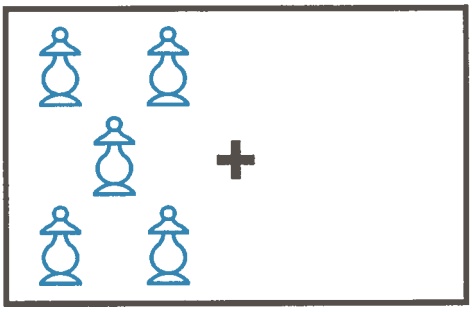
Lesson 3.14 Let's Make 10

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

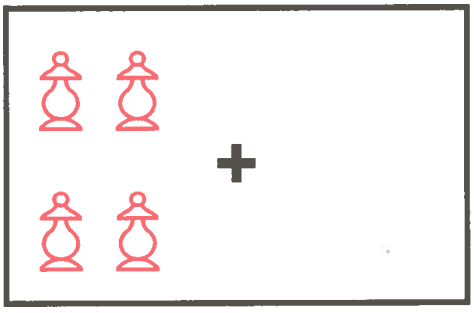
1. _____ +  = 10



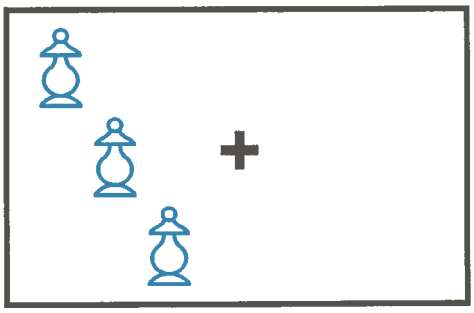
2.  + _____ = 10



3. _____ +  = 10



4.  + _____ = 10

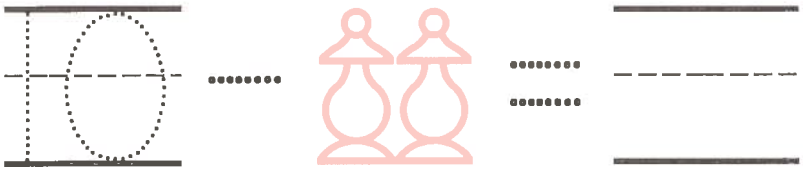


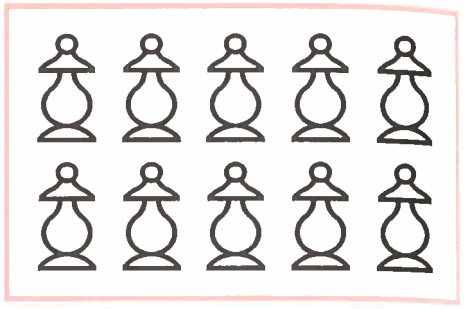
Name_____

Subtracting Numbers Up to 10

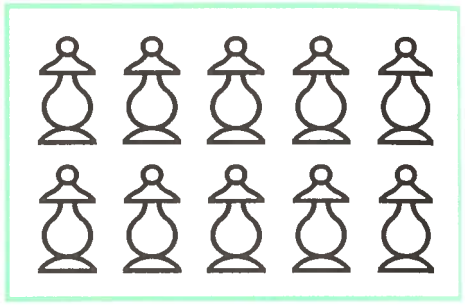
Use subtraction to solve the following equations. Use the pawn box on the right to represent your problem.

1.

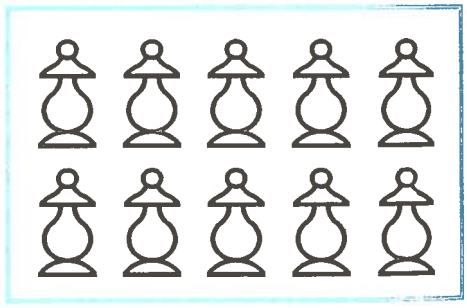




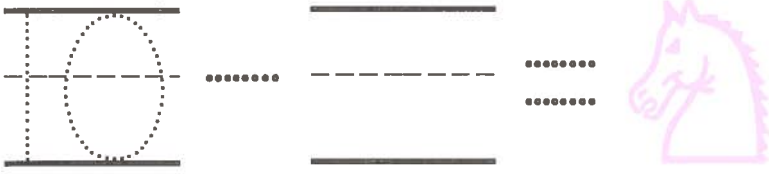
2.

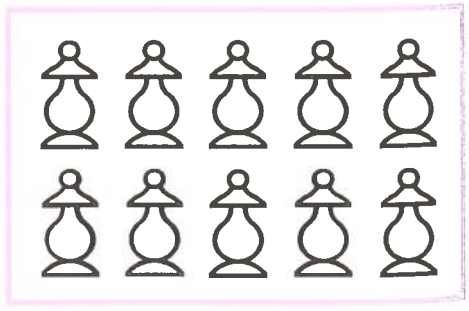


3.



4.





CONGRATULATIONS

LEVEL COMPLETED!

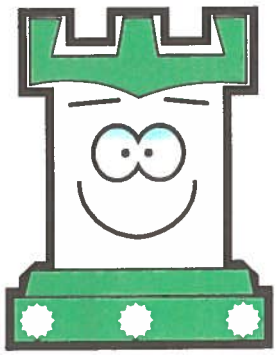
I understand addition as putting together and adding to, and I understand subtraction as taking apart and taking from.

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.

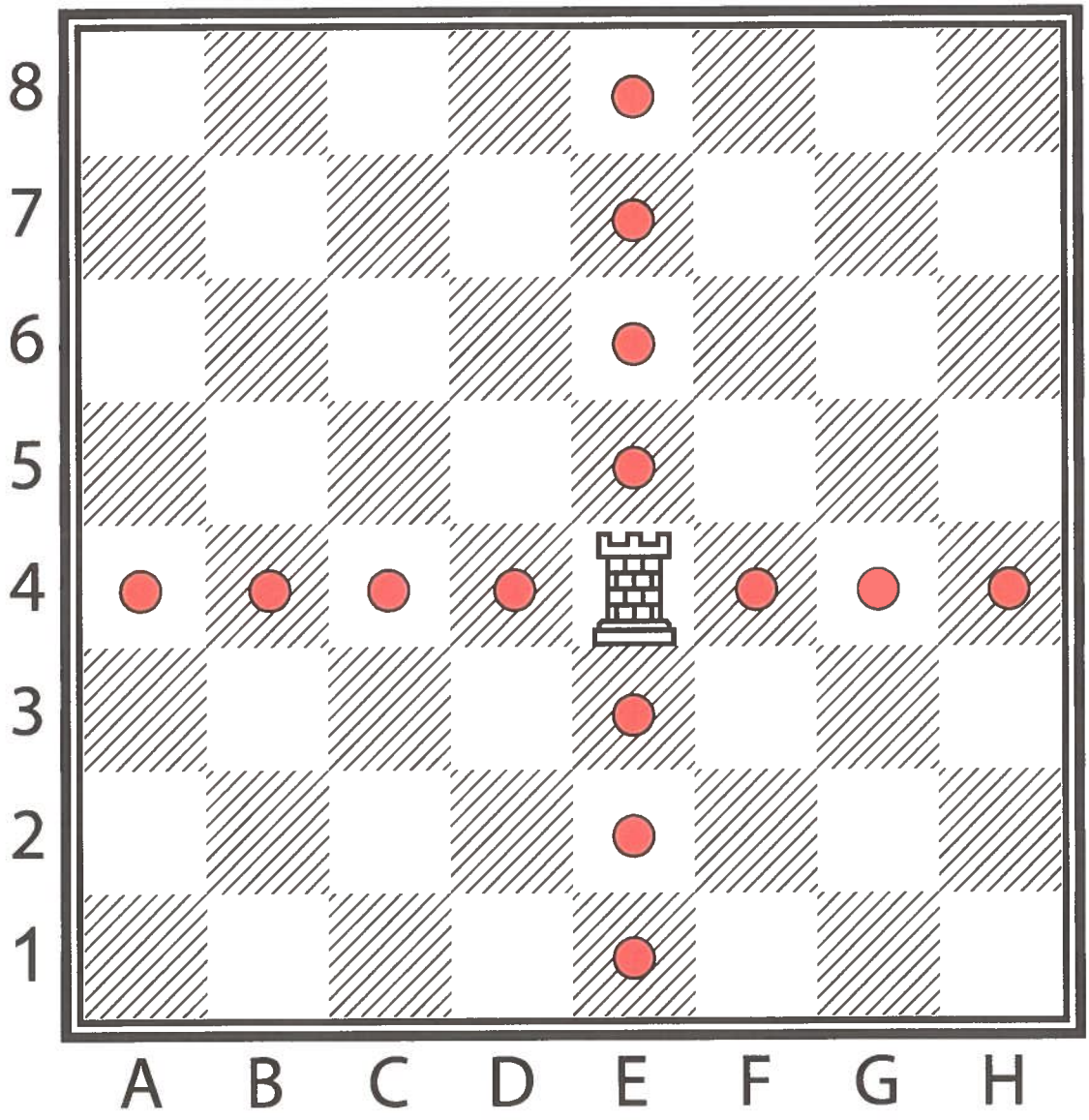
CHESS 4 MATH



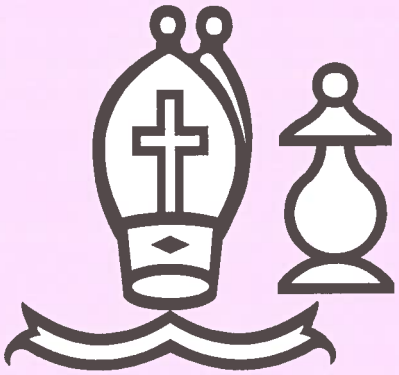
THE ROOK

Hi friends!

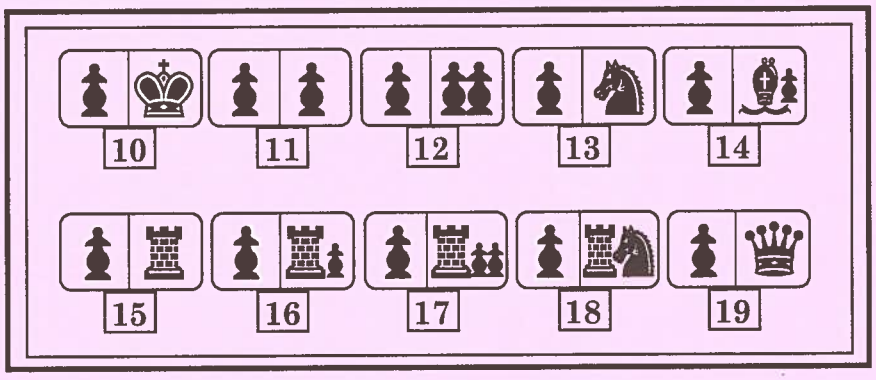
I am the rook, and I can move to any number of squares, but only in straight lines up and down or side to side. My numerical value is 5. I usually protect the king with a special move called *Castling*.

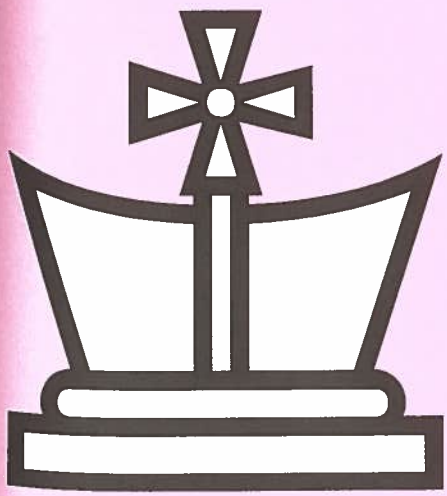


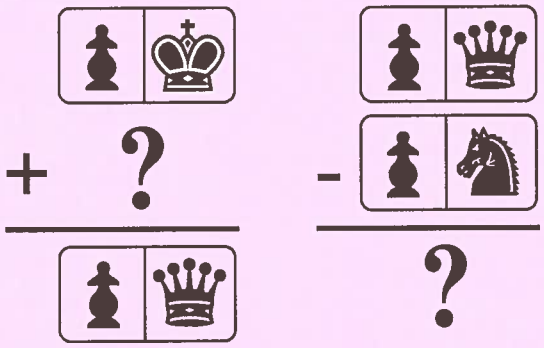
CHAPTER



NUMBER & OPERATIONS IN BASE TEN







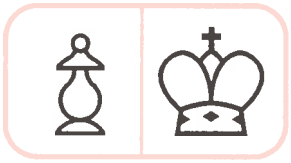
Work with numbers 11-19 to gain foundations for place value.

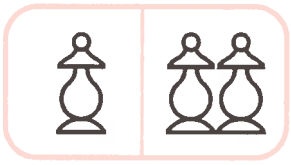
Name_____

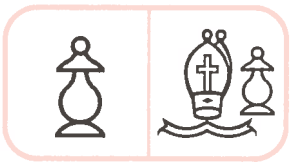
Lesson 4.1 Matching Numbers

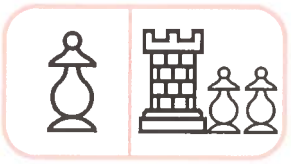
Common Core
K.NBT.A.1
MP1, MP2, MP3, MP4
MP5, MP6, MP7, MP8

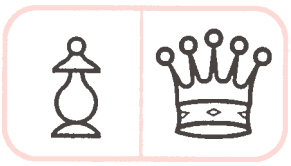
Trace a line to match the chess dominoes with the number they represent.











10

11

12

13

14

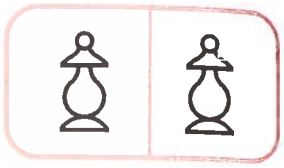
15

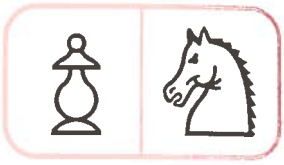
16

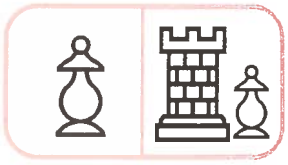
17

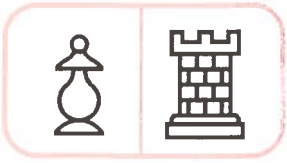
18

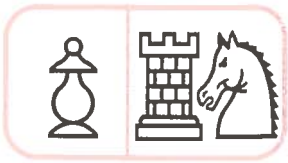
19







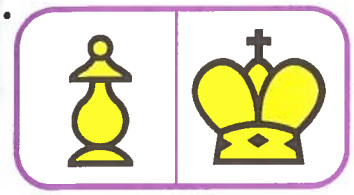


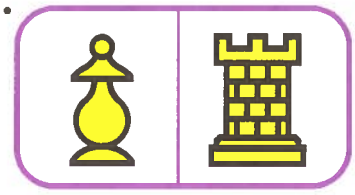


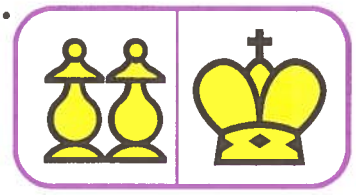
Name_____

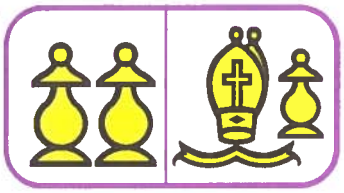
Chess Domino Practice

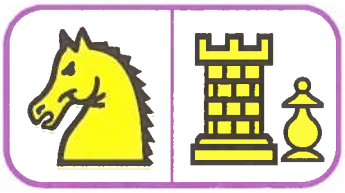
Write the two-digit number represented by each chess domino.

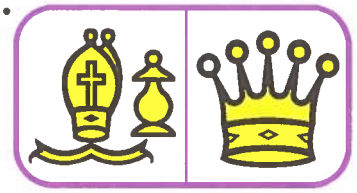
1. 

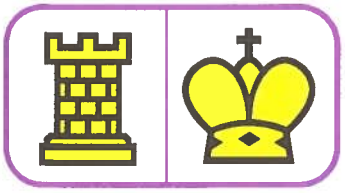
2. 

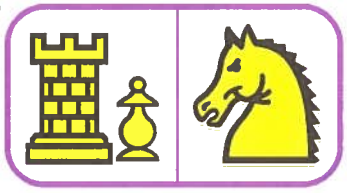
3. 

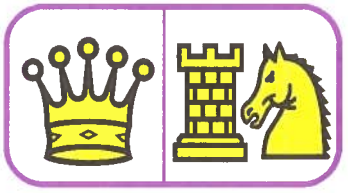
4. 

5. 

6. 

7. 

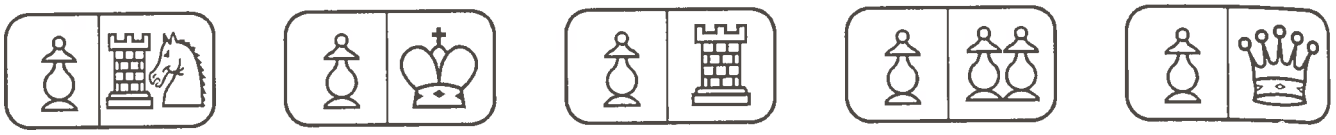
8. 

9. 

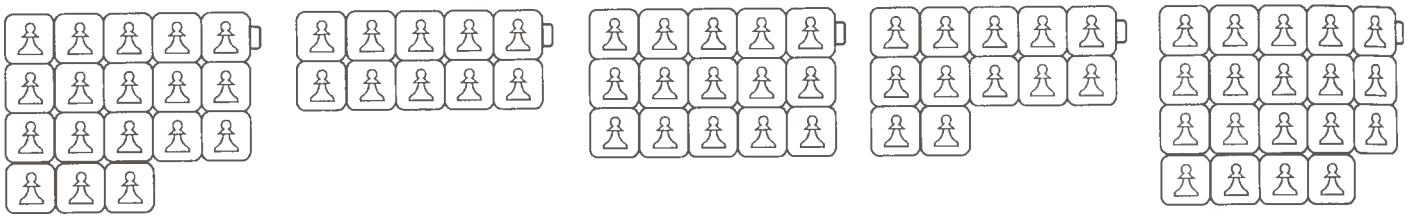
Name_____

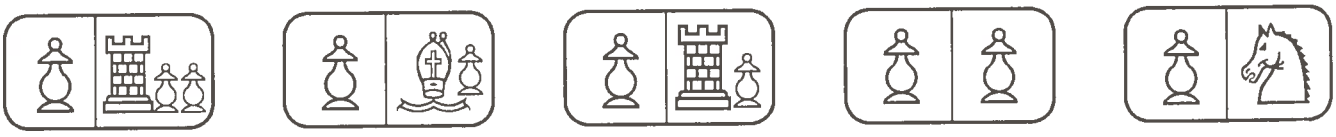
Lesson 4.2 Finding my Number

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.

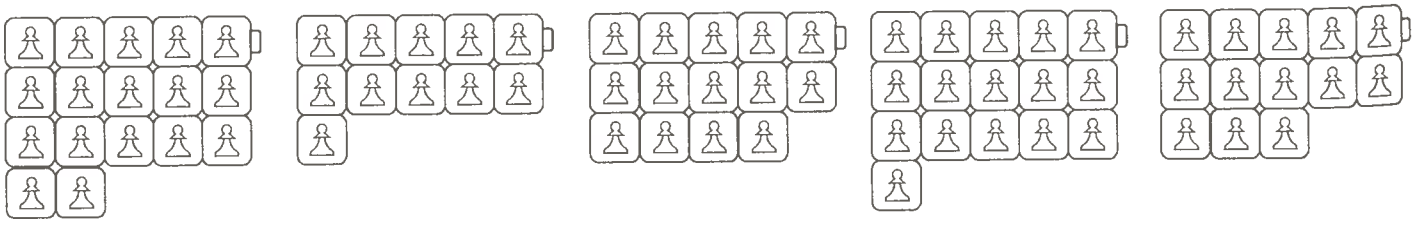


10 18 12 15 19





14 11 17 13 16

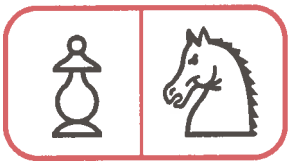


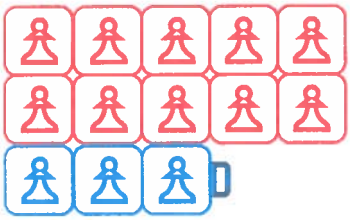
Name _____

Addition Practice

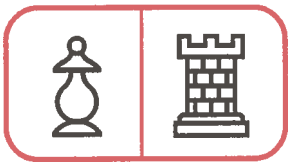
Use the chess cubes on the right to fill in the blank of the following equations.

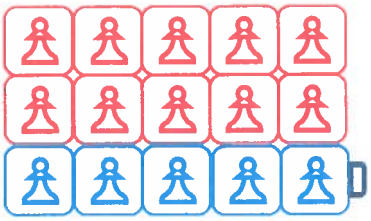
1. _____ + _____ = _____



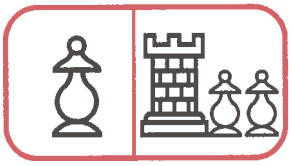


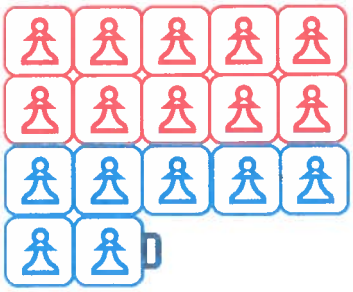
2. _____ + _____ = _____



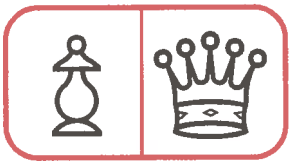


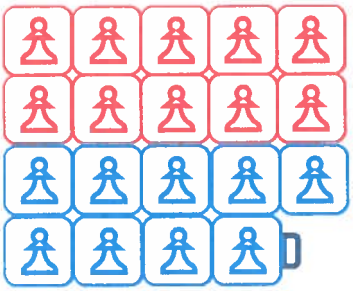
3. _____ + _____ = _____





4. _____ + _____ = _____



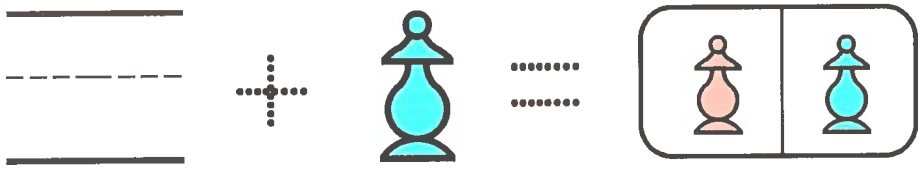


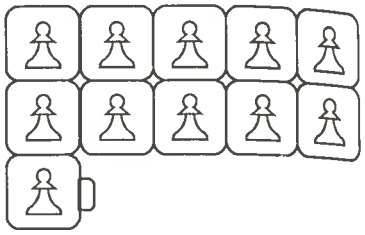
Name _____

Finding my Missing Number

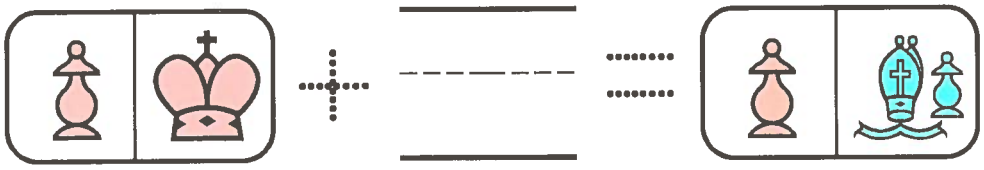
Find the missing number to complete the following equations.
Color the chess cubes using red for tens and blue for ones.

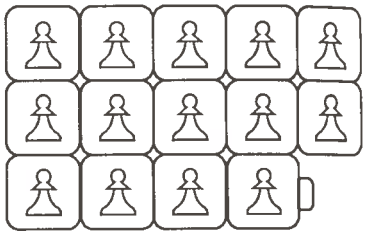
1.



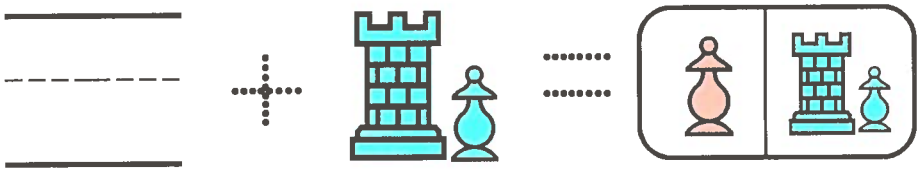


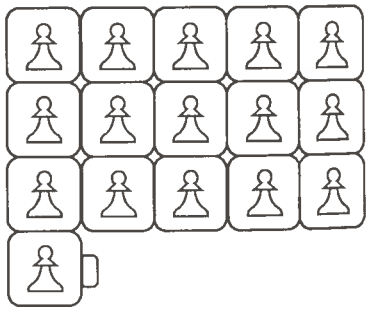
2.



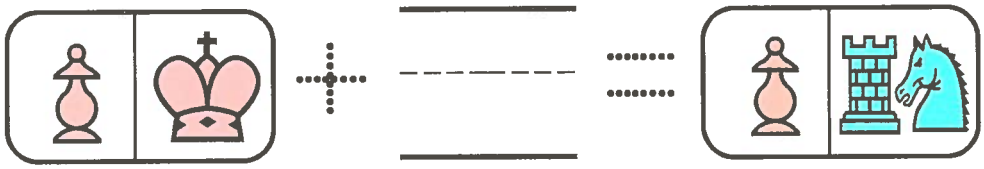


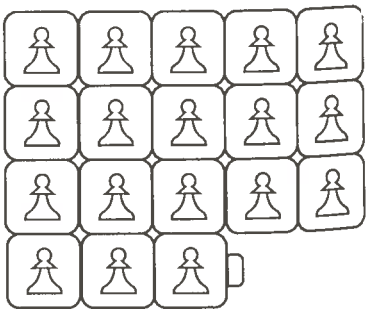
3.





4.



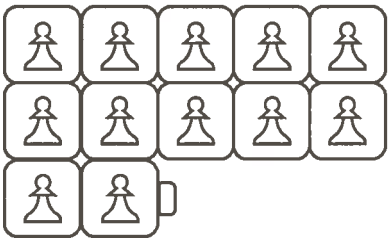


Name _____

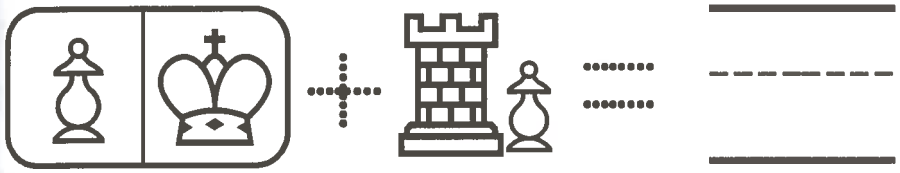
Lesson 4.3 Addition Practice

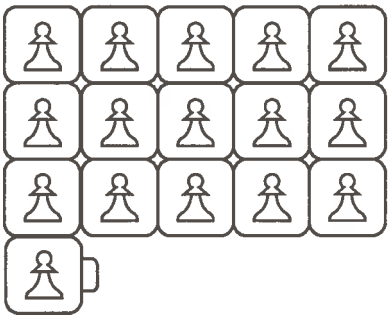
Use addition to solve the following equations. Use two different colors to show the addition on the chess cubes. Write the number sentence below each exercise.

1.

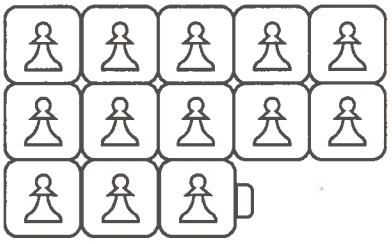


2.

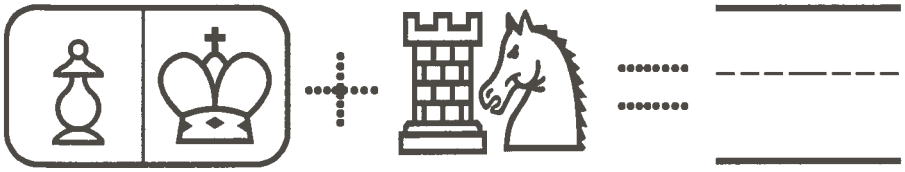


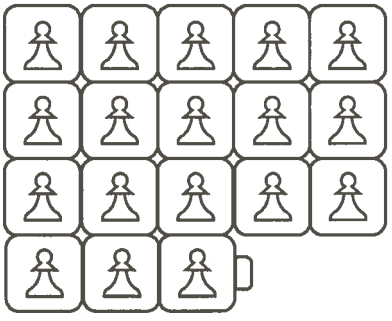


3.



4.



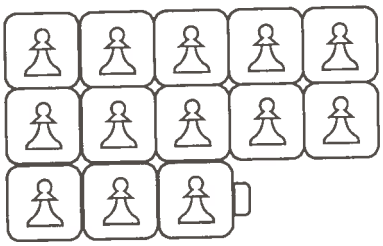


Name_____

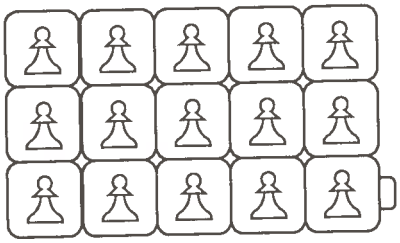
Making Up Addition Practice

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

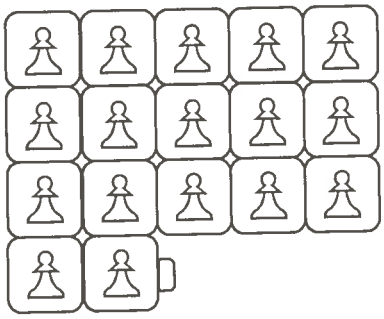
1.



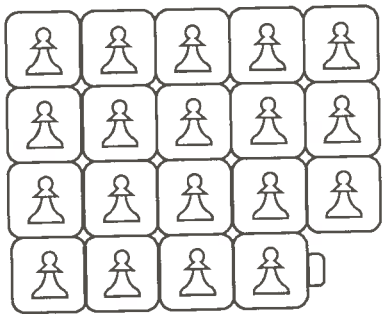
2.



3.



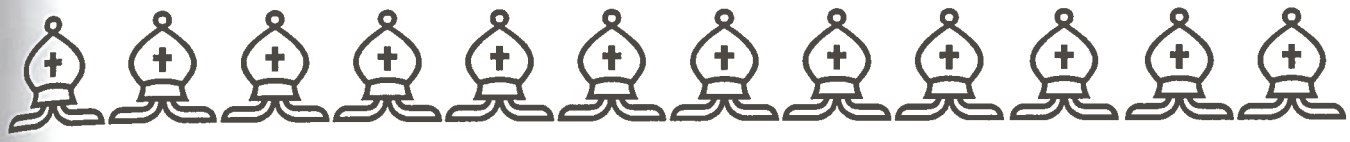
4.



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.

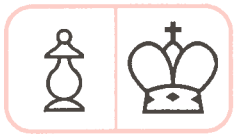
_____ + _____ = _____

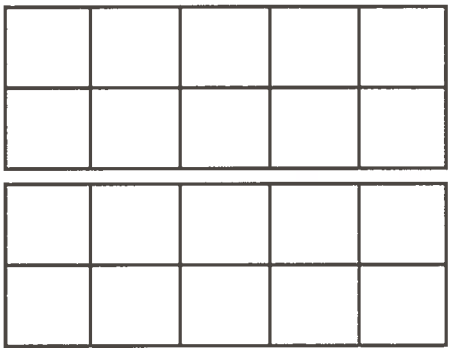
Name_____

Lesson 4.4 Practice with the Ten Frame

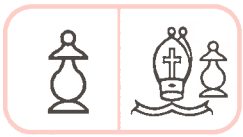
Draw circles on the ten frames to represent the number indicated by the chess domino.

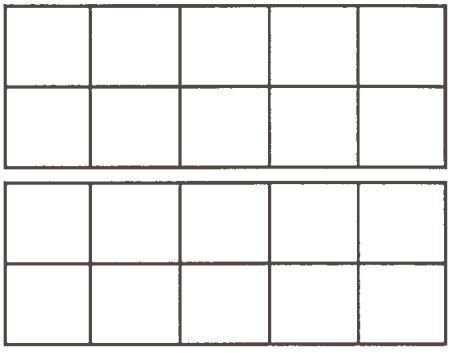
1.



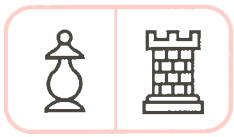


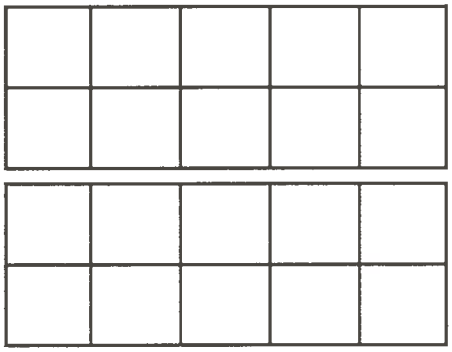
2.



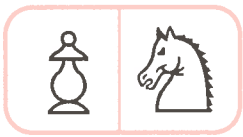


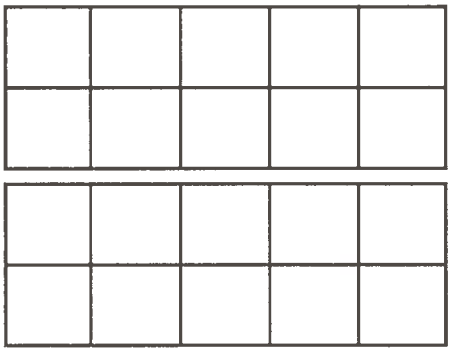
3.



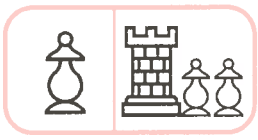


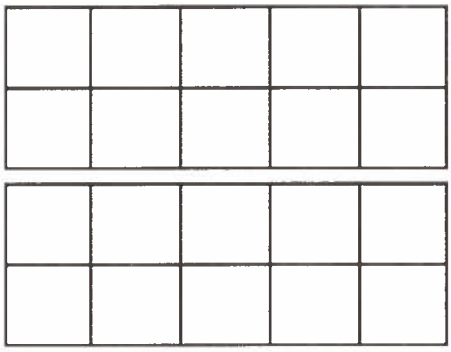
4.



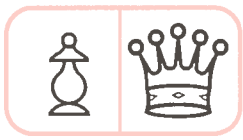


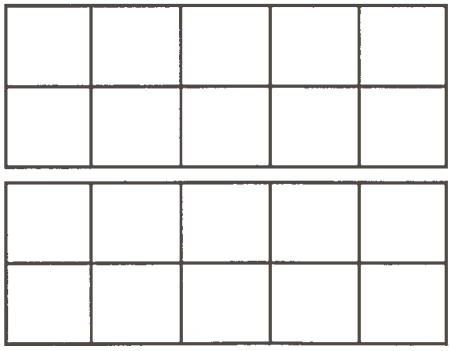
5.





6.



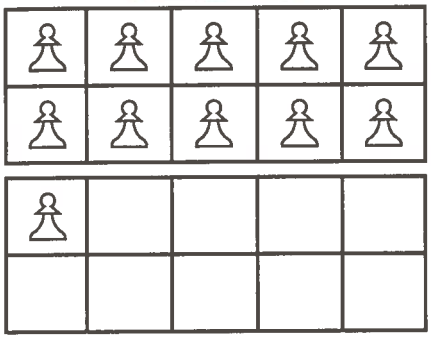


Name _____

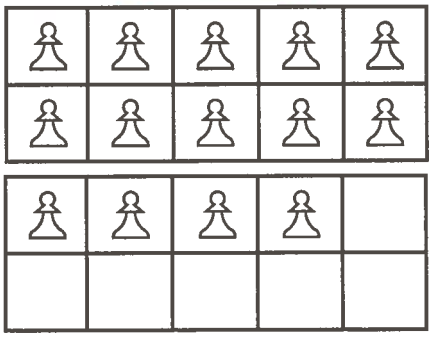
Counting on the Ten Frame

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

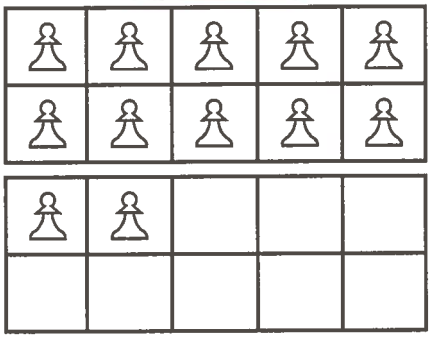
1.



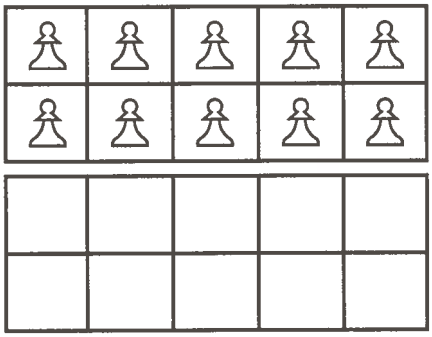
2.



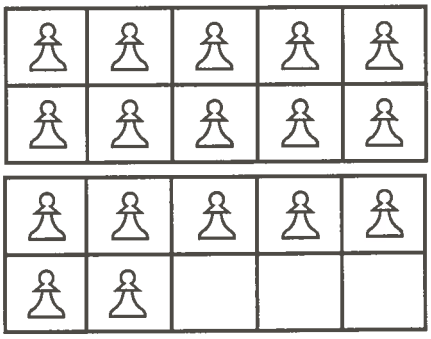
3.



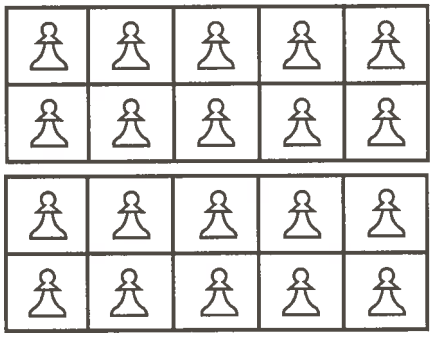
4.



5.



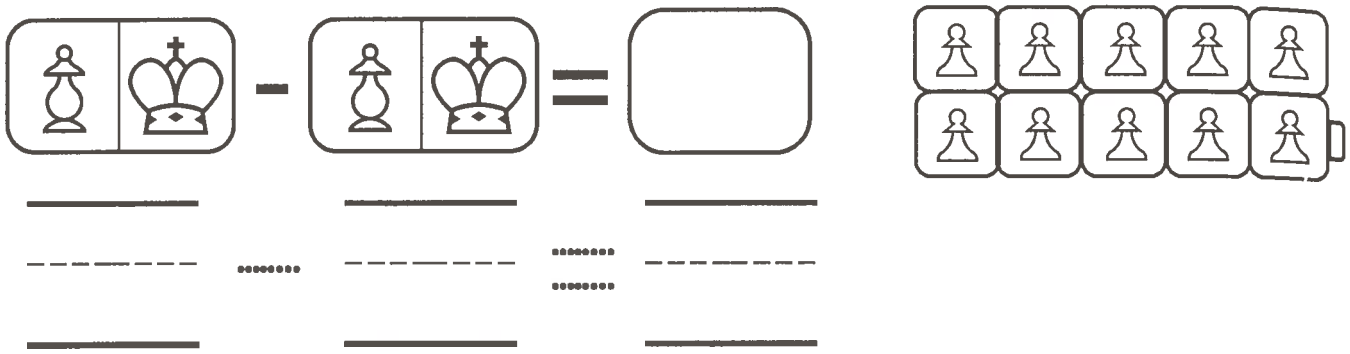
6.

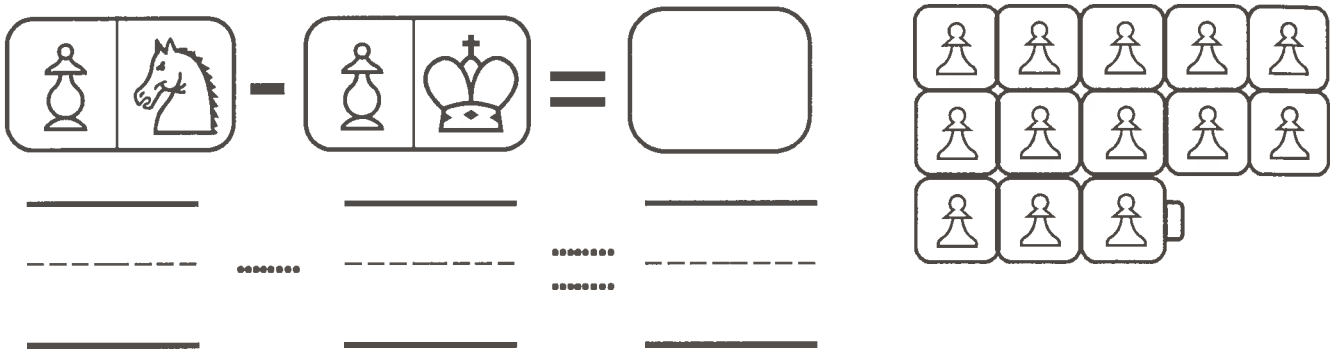


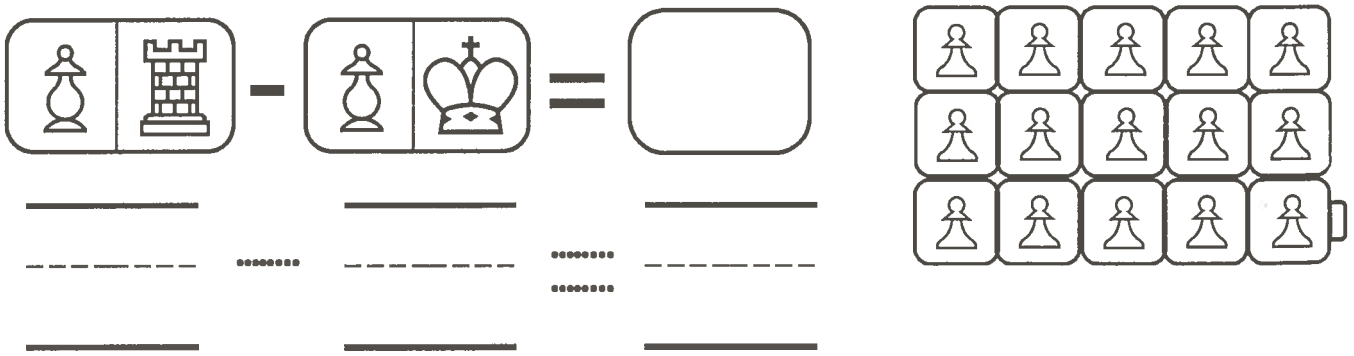
Name_____

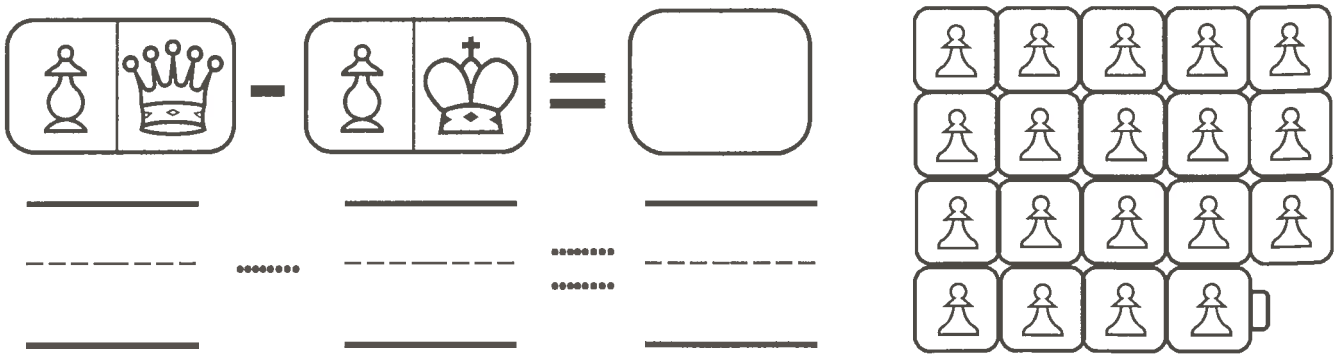
Lesson 4.5 Subtraction with Chess Domino

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

1. 

2. 

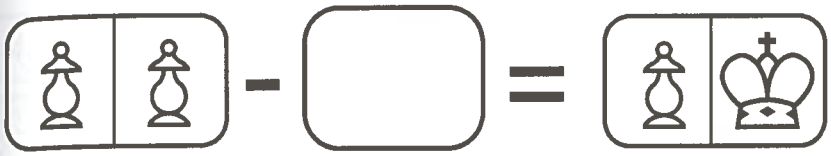
3. 

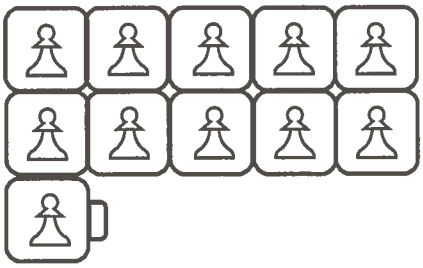
4. 

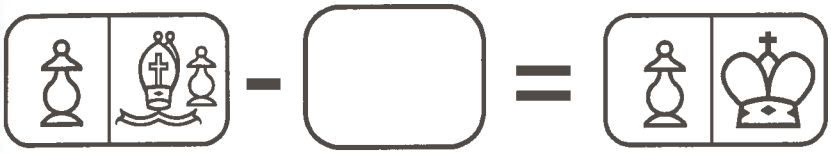
Name _____

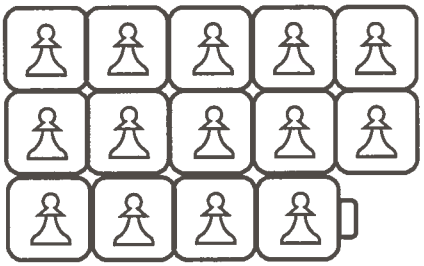
Find the Missing Number I

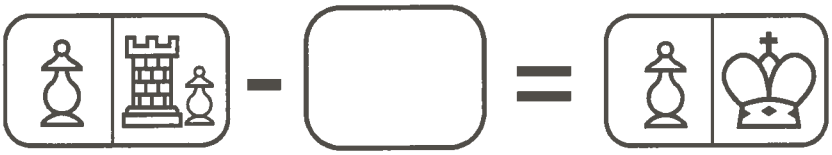
Find the missing number in the following equations. Cross out the pawns in the cube train to represent the problem. Write the number sentence.

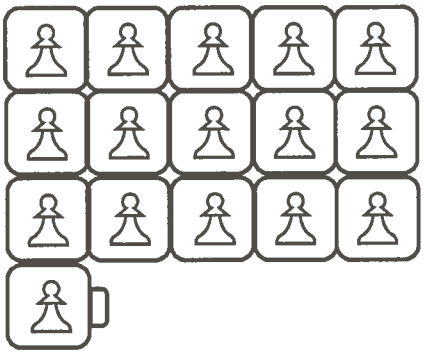
1. 

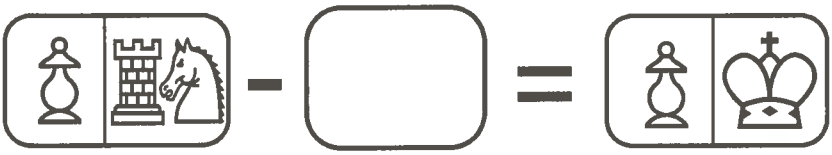


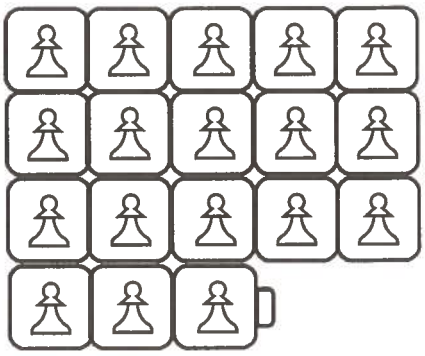
2. 



3. 



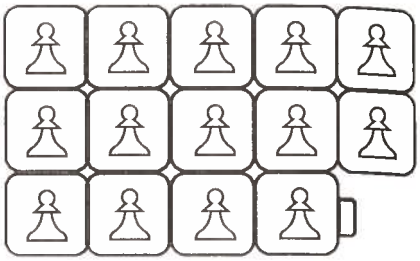
4. 

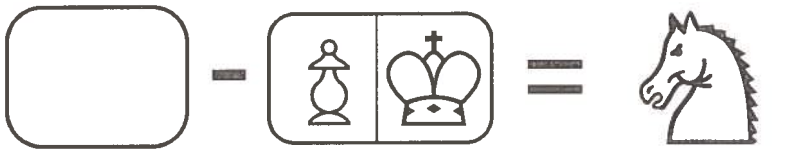
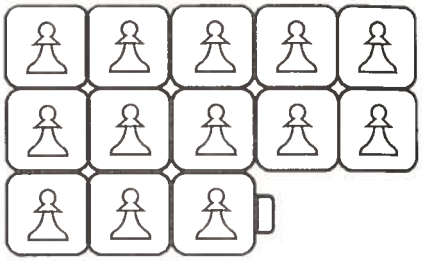


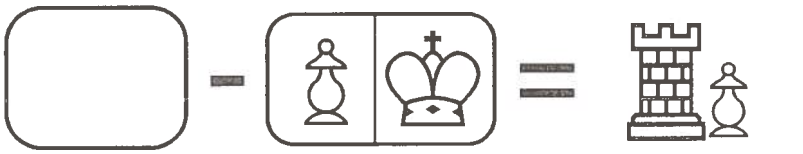
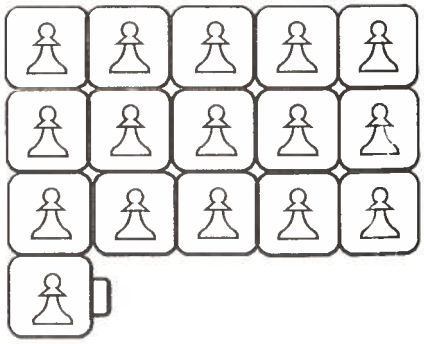
Name _____

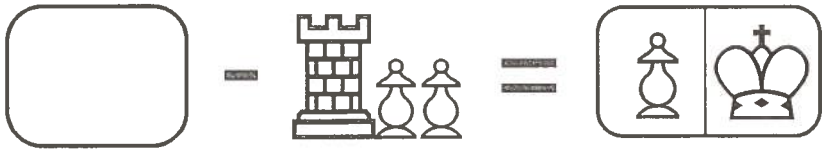
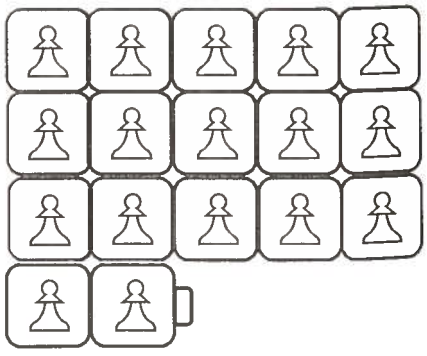
Find the Missing Number II

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.  

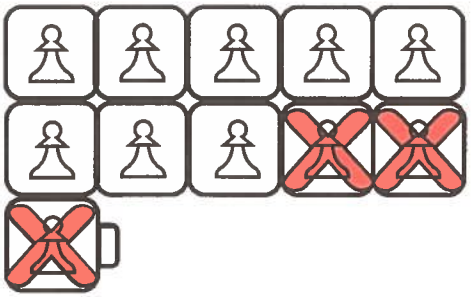
4.  

Name _____

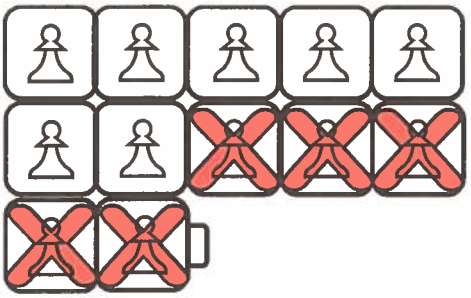
Lesson 4.6 Chess Cubes Subtraction Practice

Write the number sentence according to the chess cubes.

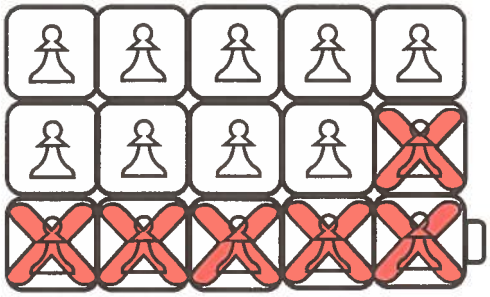
1. _____ ..... _____ ..... _____



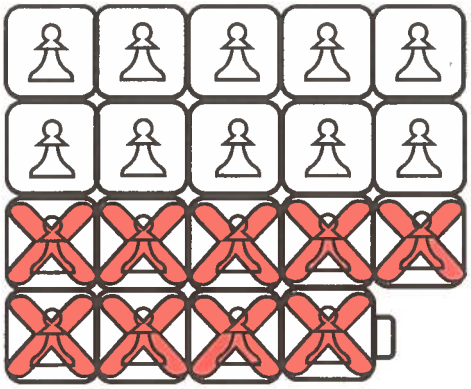
2. _____ ..... _____ ..... _____



3. _____ ..... _____ ..... _____



4. _____ ..... _____ ..... _____

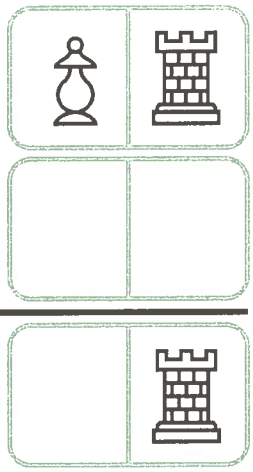


Name_____

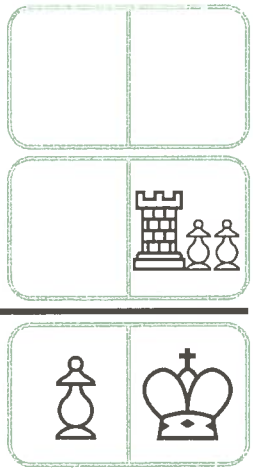
Chess Domino - Missing Number

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

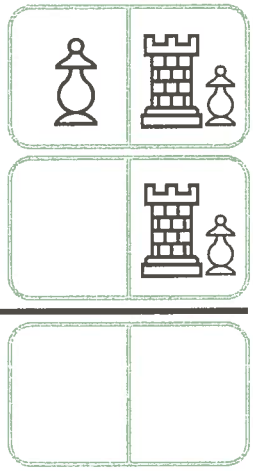
1.



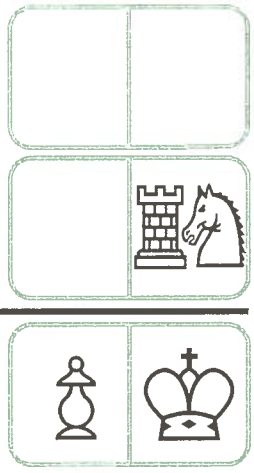
2.



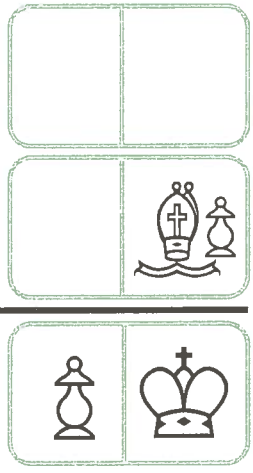
3.



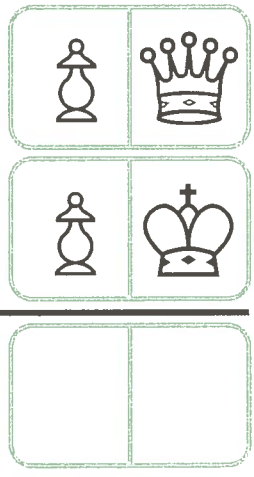
4.



5.



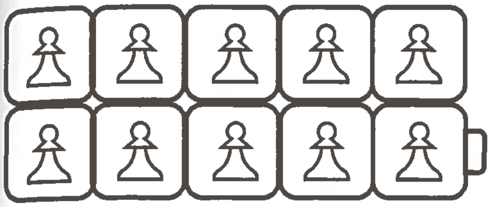
6.



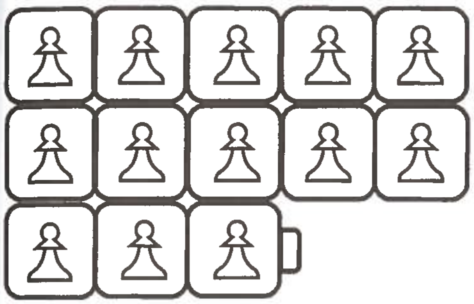
Name

Lesson 4.7 Making Up Subtraction Practice

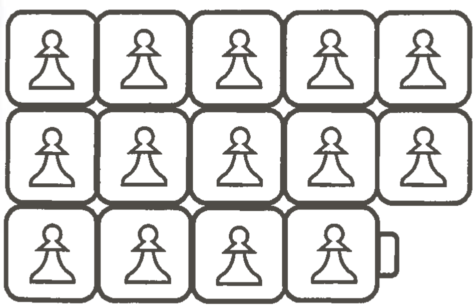
Cross out the chess cubes to make your subtraction problem.

1. 

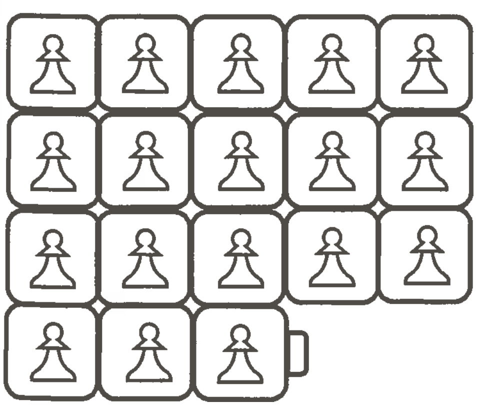
____ − ____ = ____

2. 

____ − ____ = ____

3. 

____ − ____ = ____

4. 

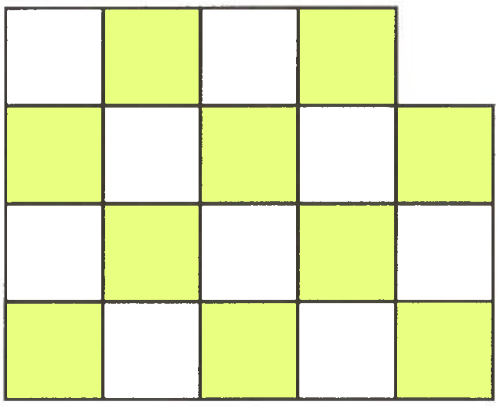
____ − ____ = ____

Name _____

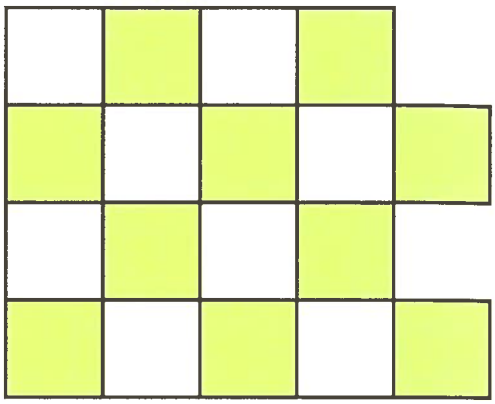
Chess Squares Subtraction Practice

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

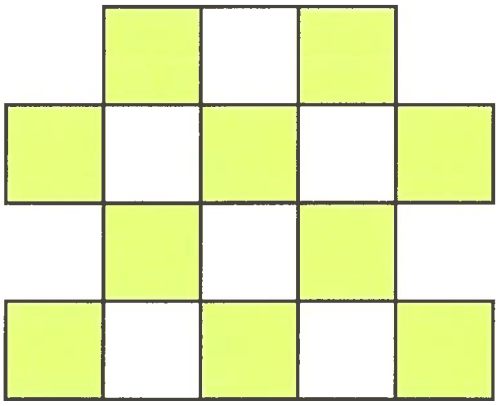
1.



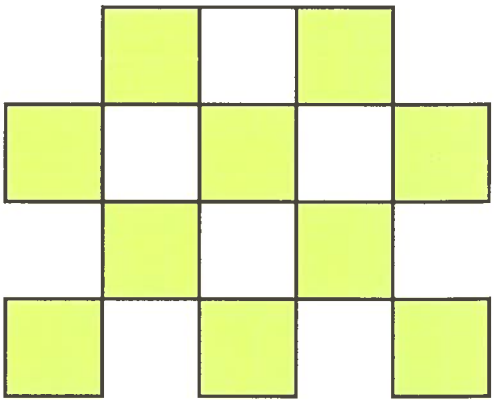
2.



3.



4.



CONGRATULATIONS

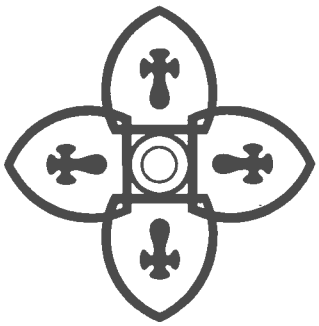
LEVEL  COMPLETED!

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

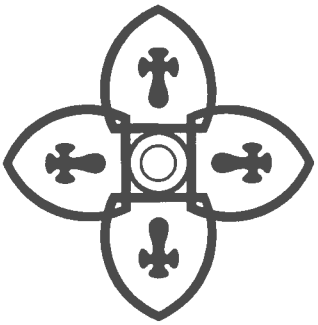
I can use tens frames to show the value of the chess domino.

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

I know how to move the chess rook.



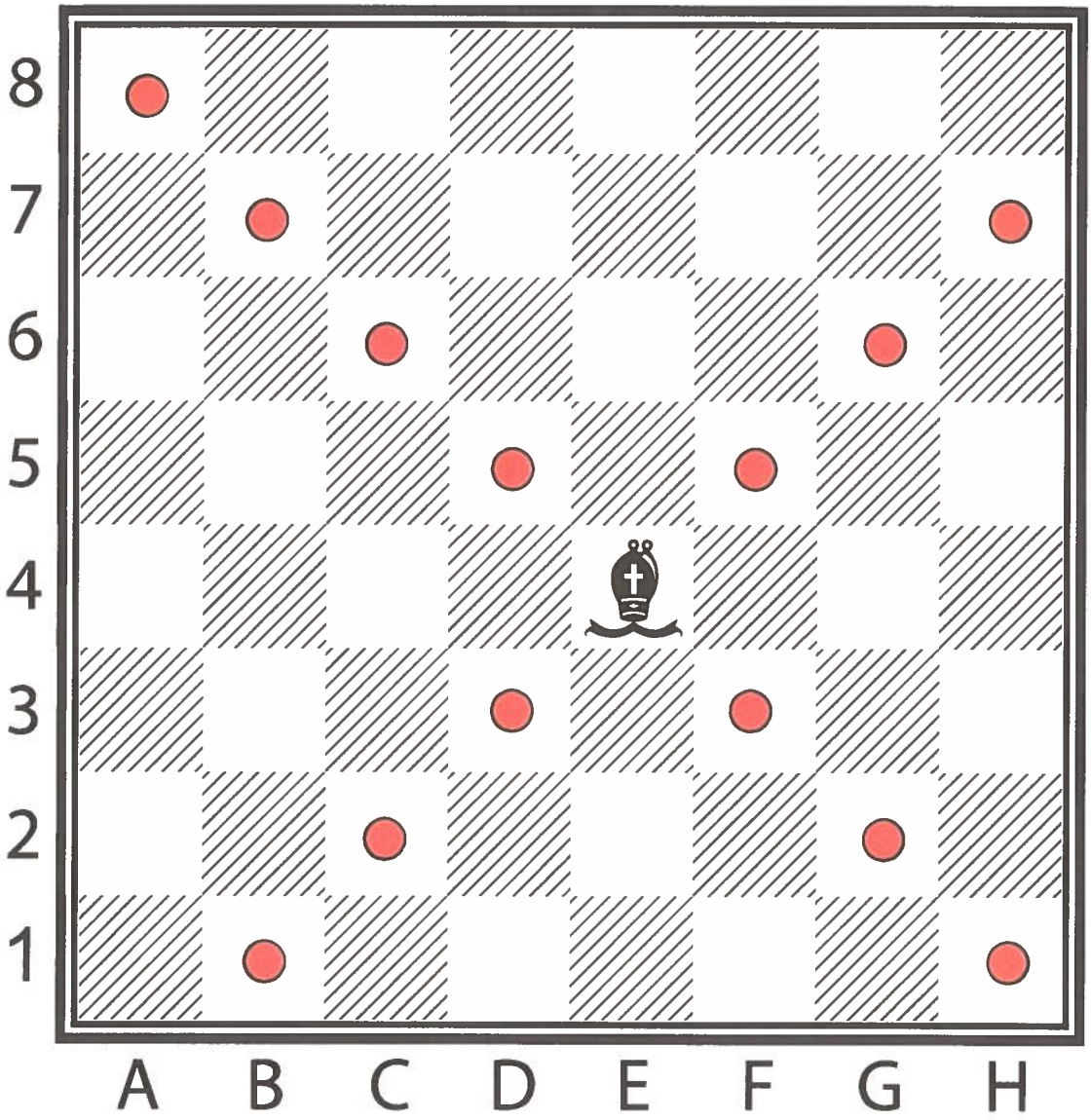
CHESS 4 MATH



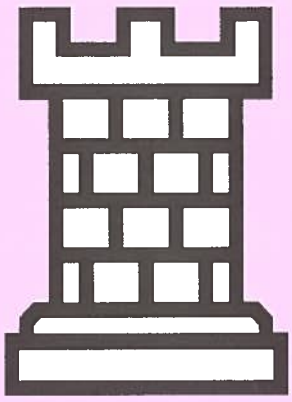
THE BISHOP

Hi friends!

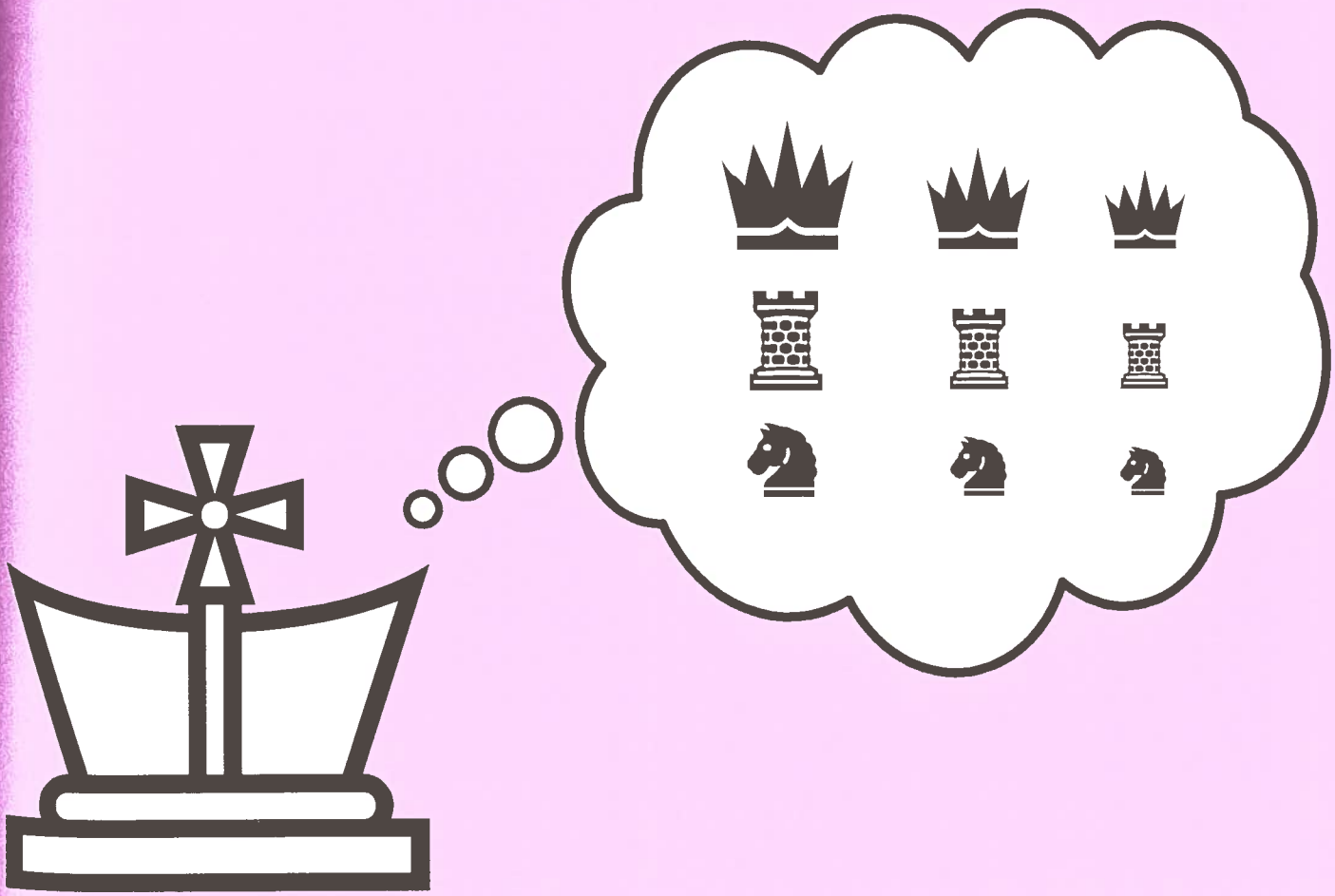
I am the bishop, and I can move any number of squares, but only along the diagonals and until another piece gets in my way. My numerical value is 3.



CHAPTER



MEASUREMENT & DATA



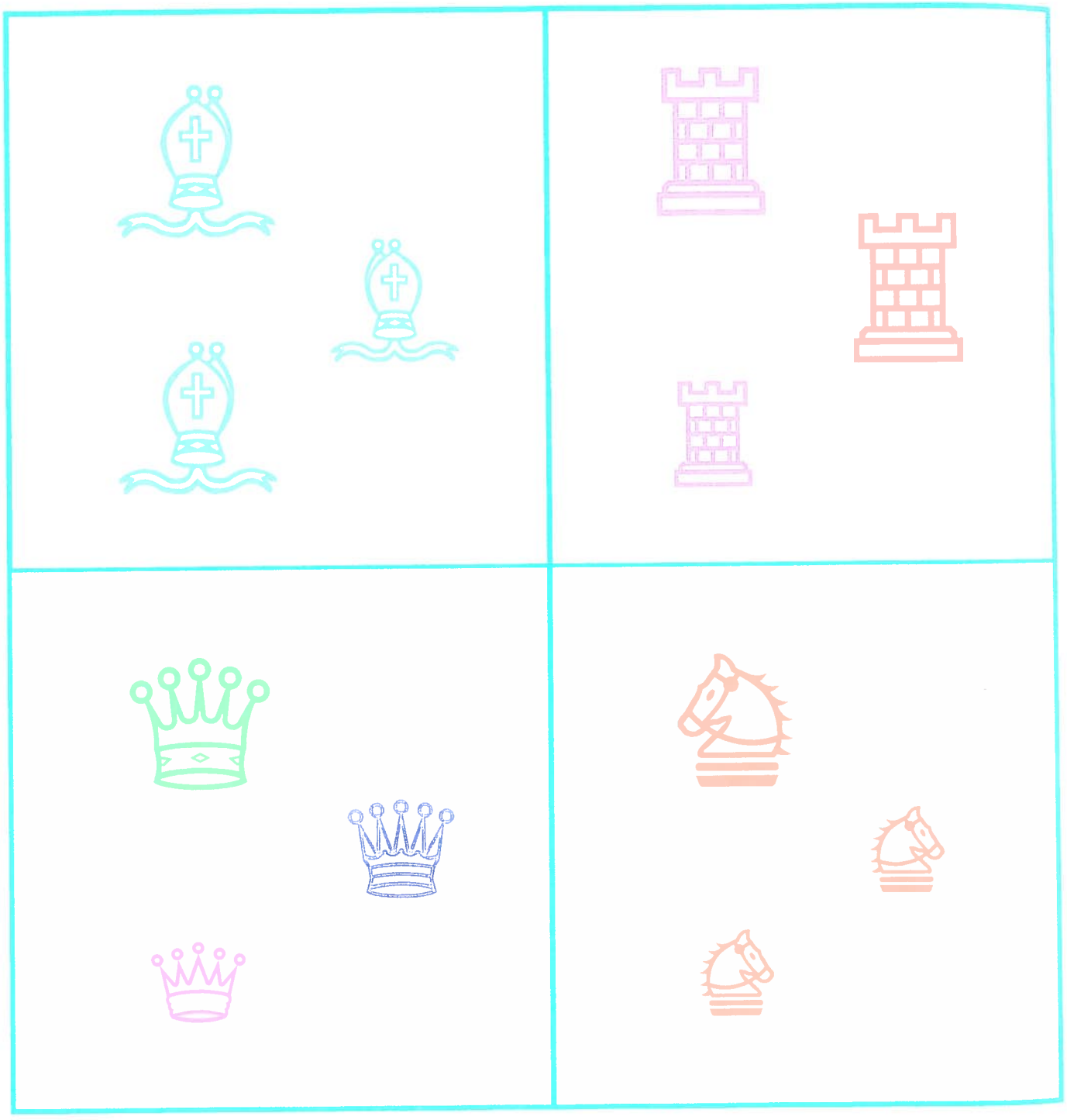
Describe and compare measurable attributes.

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

Name_____

Lesson 5.1 Comparing Chess Pieces

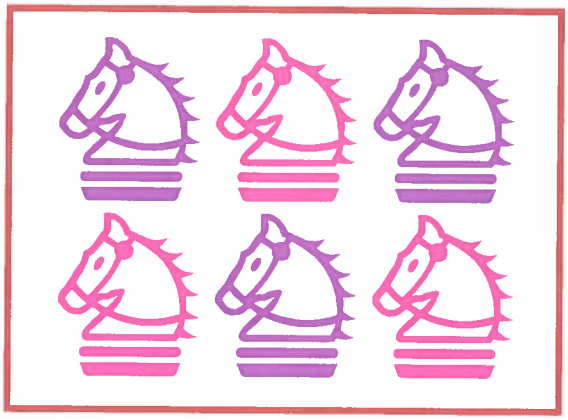
Describe the attributes of the pieces below. Identify the similarities and differences.



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.

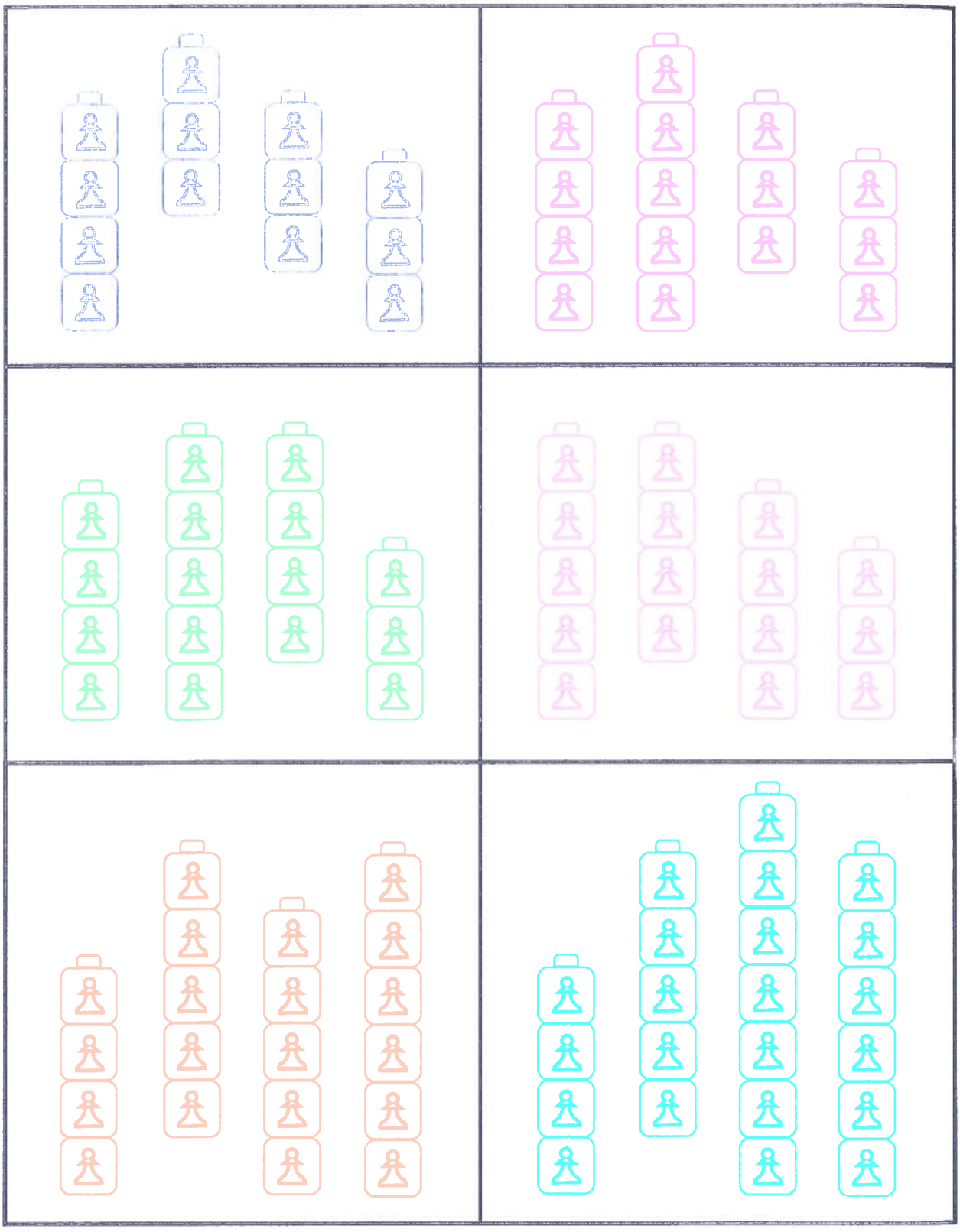


Same	Different

Name_____

Measuring Chess Cubes

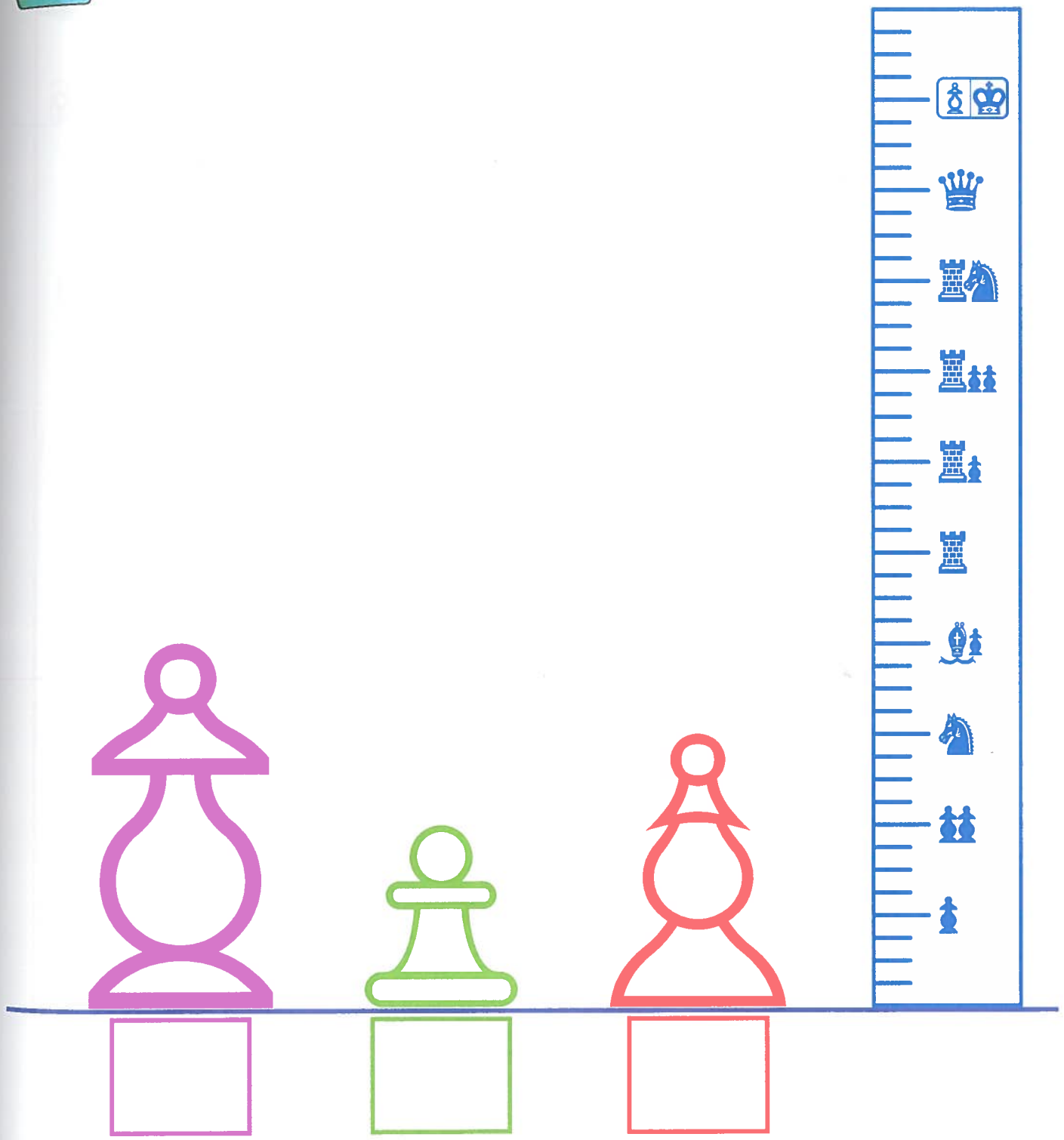
Identify and circle the tallest chess cube in each case.



Name _____

Lesson 5.2 Measuring Height I

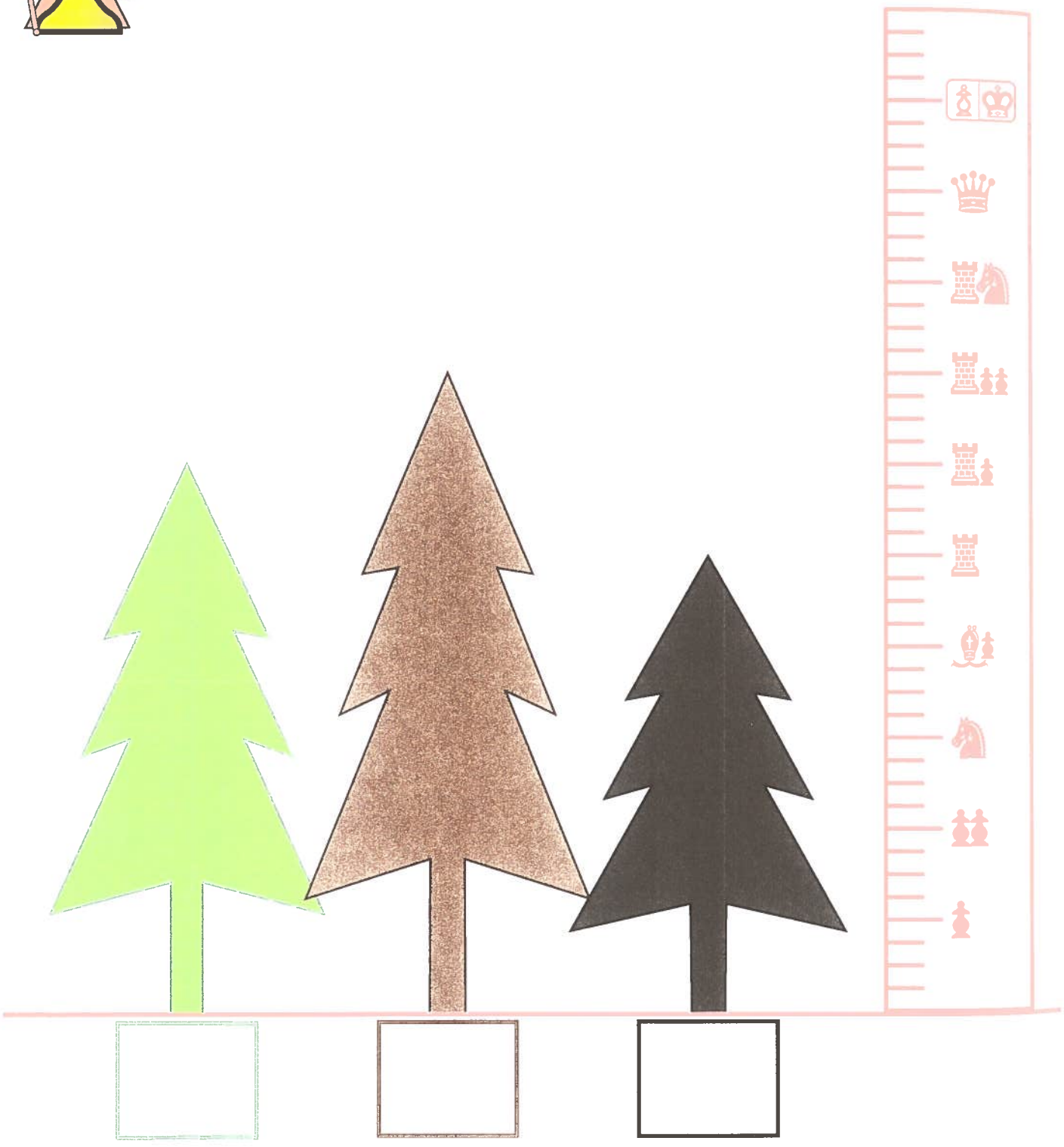
Using the chess ruler, measure the height of each pawn in inches. Record the answer in the squares below each pawn. Circle the tallest pawn, and place an X on the smallest pawn.



Name_____

Measuring Height II

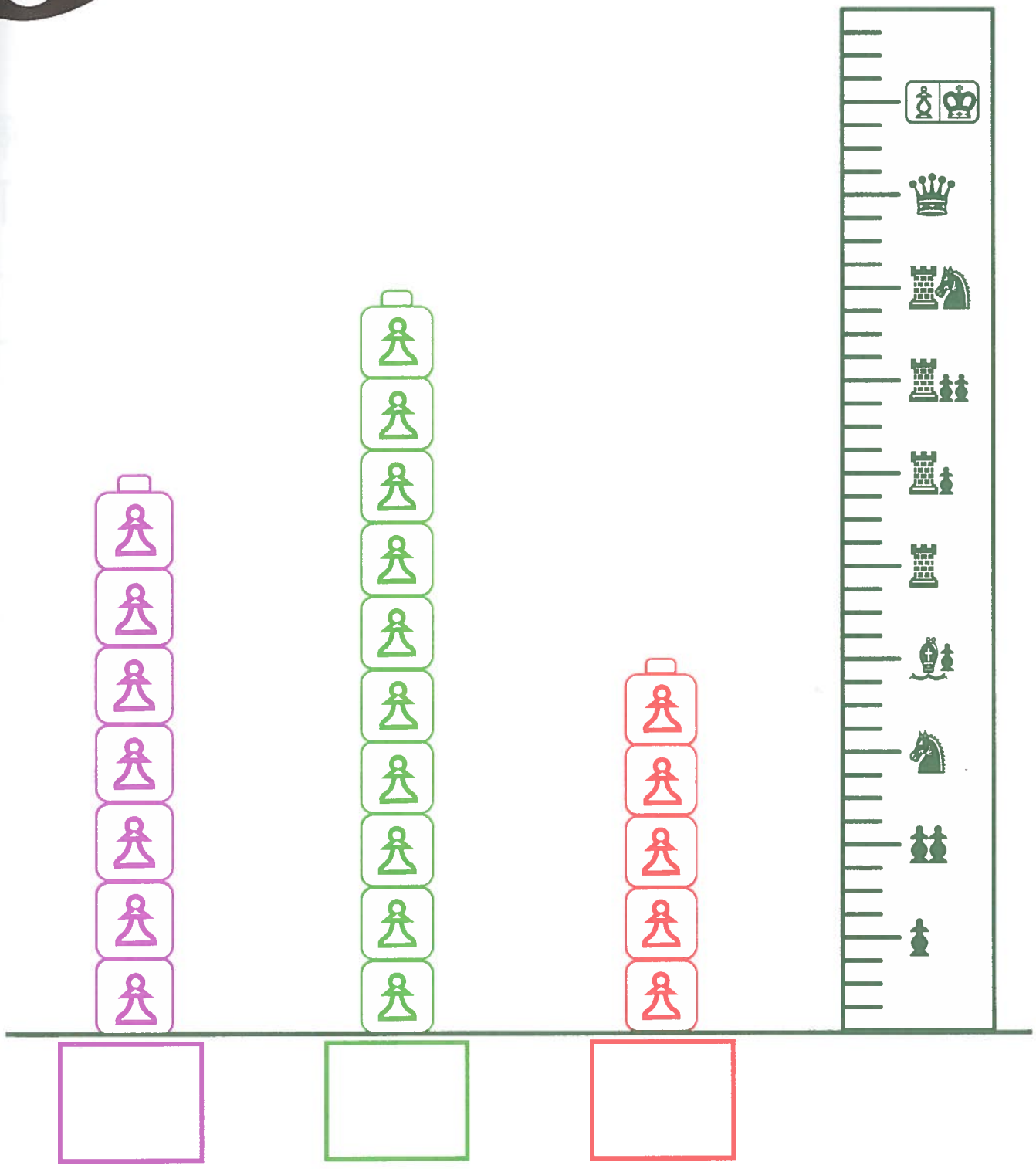
Using the chess ruler, measure the height of each pine tree in inches. Record the height below each tree. Circle the tallest tree, and place an X on the smallest tree.



Name_____

Measuring Height III

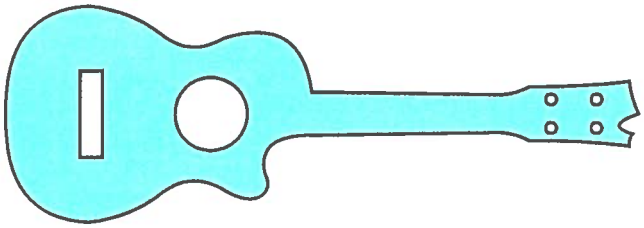
Using the chess ruler, measure the height of each stack in inches. Record the answer below each stack. Circle the tallest stack, and place an X on the smallest stack.



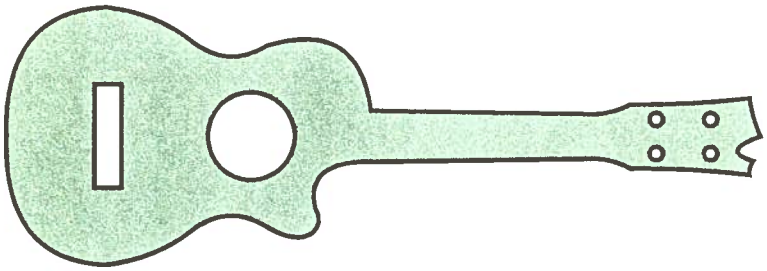
Name_____

Measuring my Guitars

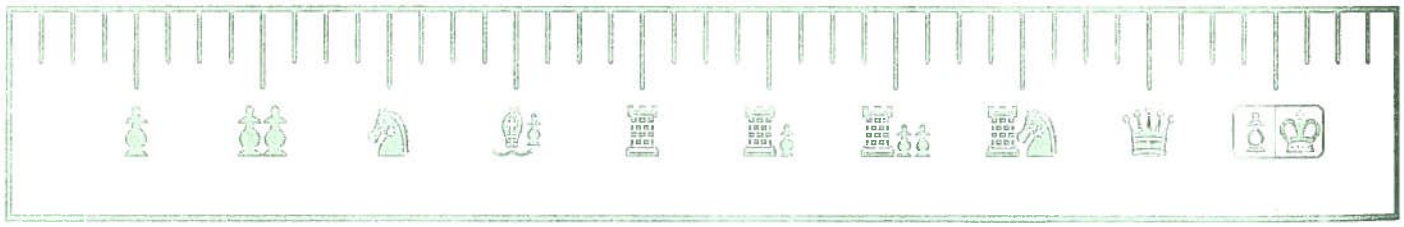
Use the chess ruler to measure each guitar. Record the length on the blank line.
Then, circle the longest guitar, and put an X on the smallest guitar.

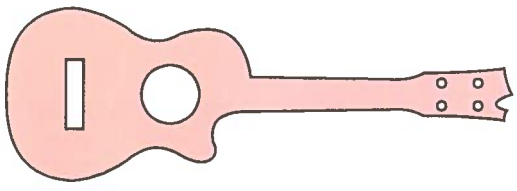


_____ inches



_____ inches





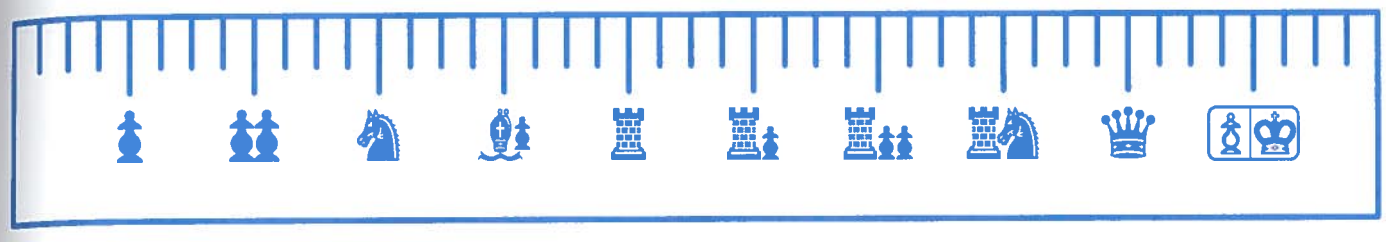
_____ inches

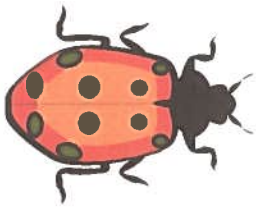
Name_____

Lesson 5.3 Measuring Animals

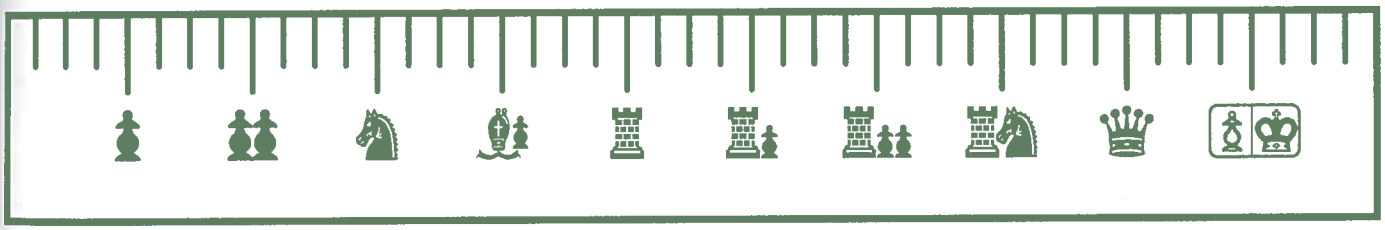
Use the chess ruler to measure each animal. Record the length on the blank line. Then, circle the longest animal, and put an X on the smallest animal.

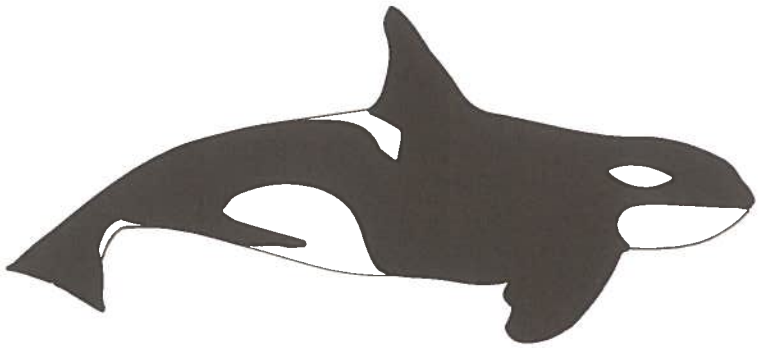
_____ inches



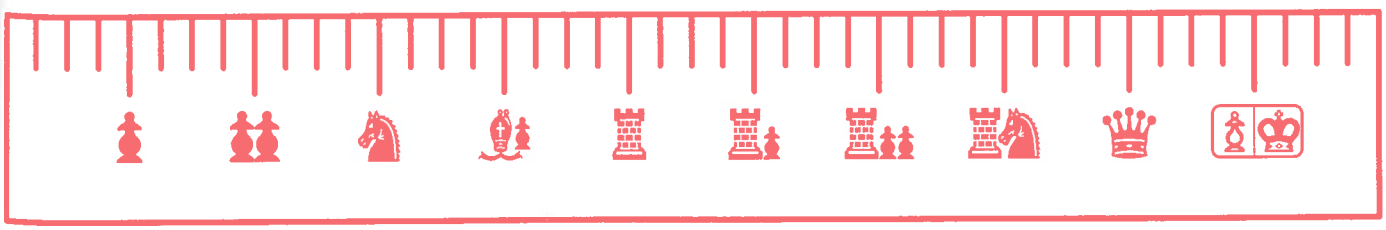


_____ inches





_____ inches

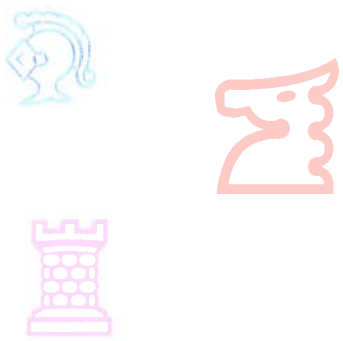


Name_____

Bigger or Smaller

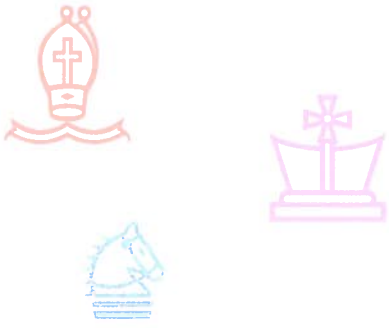
Follow the instructions in each box.
Find the patterns on the apples. What comes next?

Circle the bigger piece



Circle the smaller piece

Circle the smaller piece

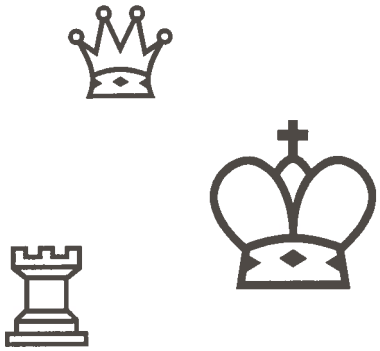


Circle the bigger piece

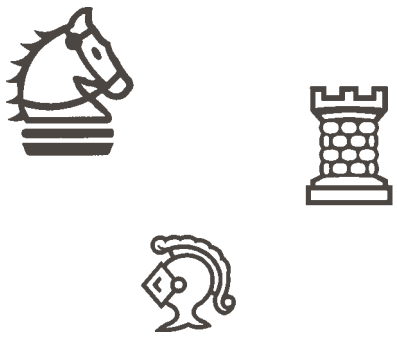
Name_____

Color the Larger or Smaller

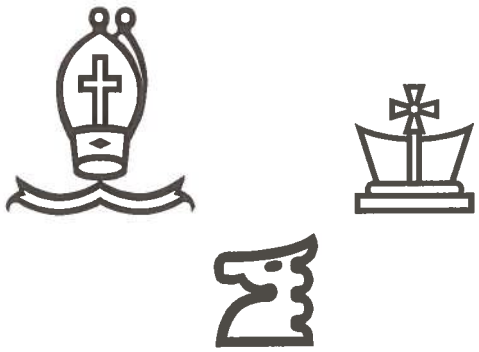
Color the larger or smaller piece according to the instructions in each box.
Find the patterns on the stars. What comes next?



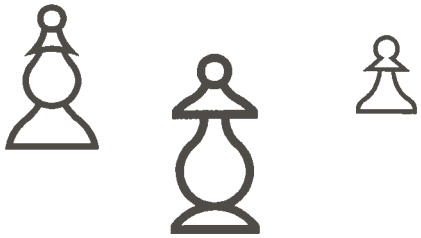
Color the larger piece



Color the smaller piece



Color the larger piece



Color the smaller piece

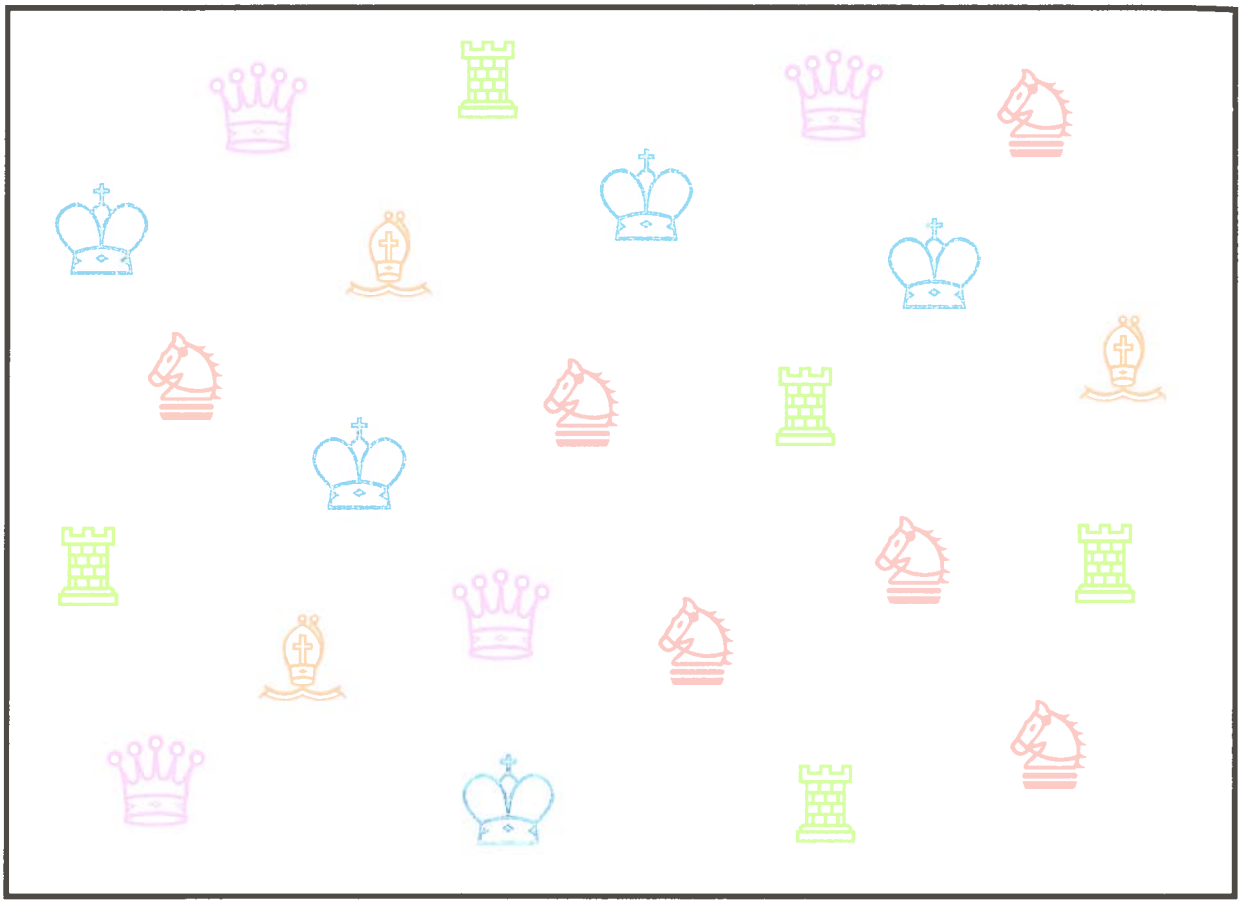
Classify objects and count the number of objects in each category.

Name_____

Lesson 5.4 Classifying Chess Pieces I

Common Core
K.MD.B.3
MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8.

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

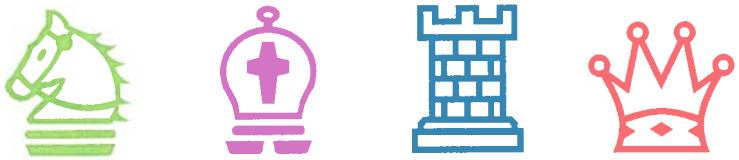


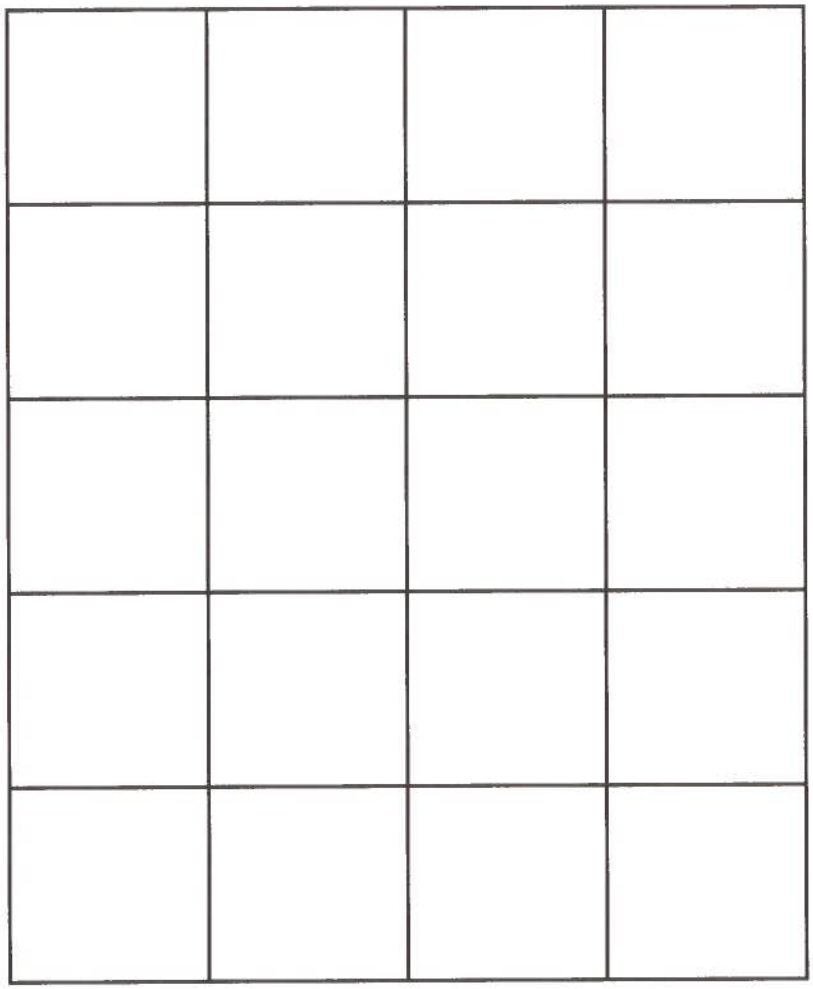
1. Draw circles around the knights.
2. Draw squares around the kings.
3. Draw triangles around the bishops.
4. Draw rectangles around the rooks.
5. Cross out the queens.
6. How many knights are there?
7. How many kings are there?
8. How many pieces are there in all?

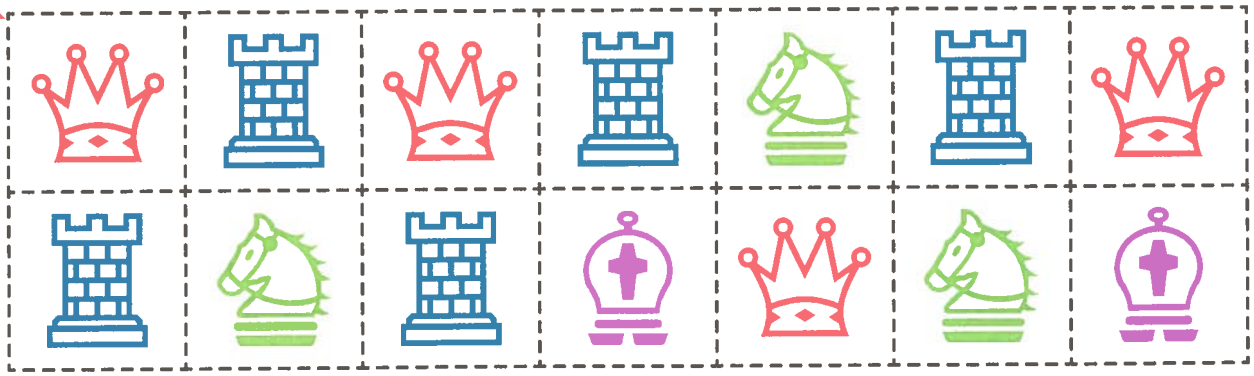
Name _____

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?







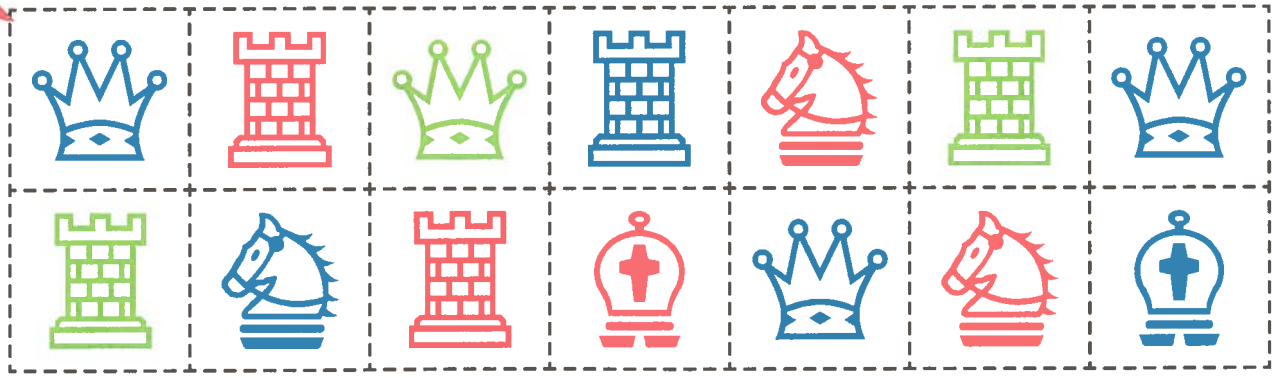
This page is blank for the cutting activity on the opposite side.

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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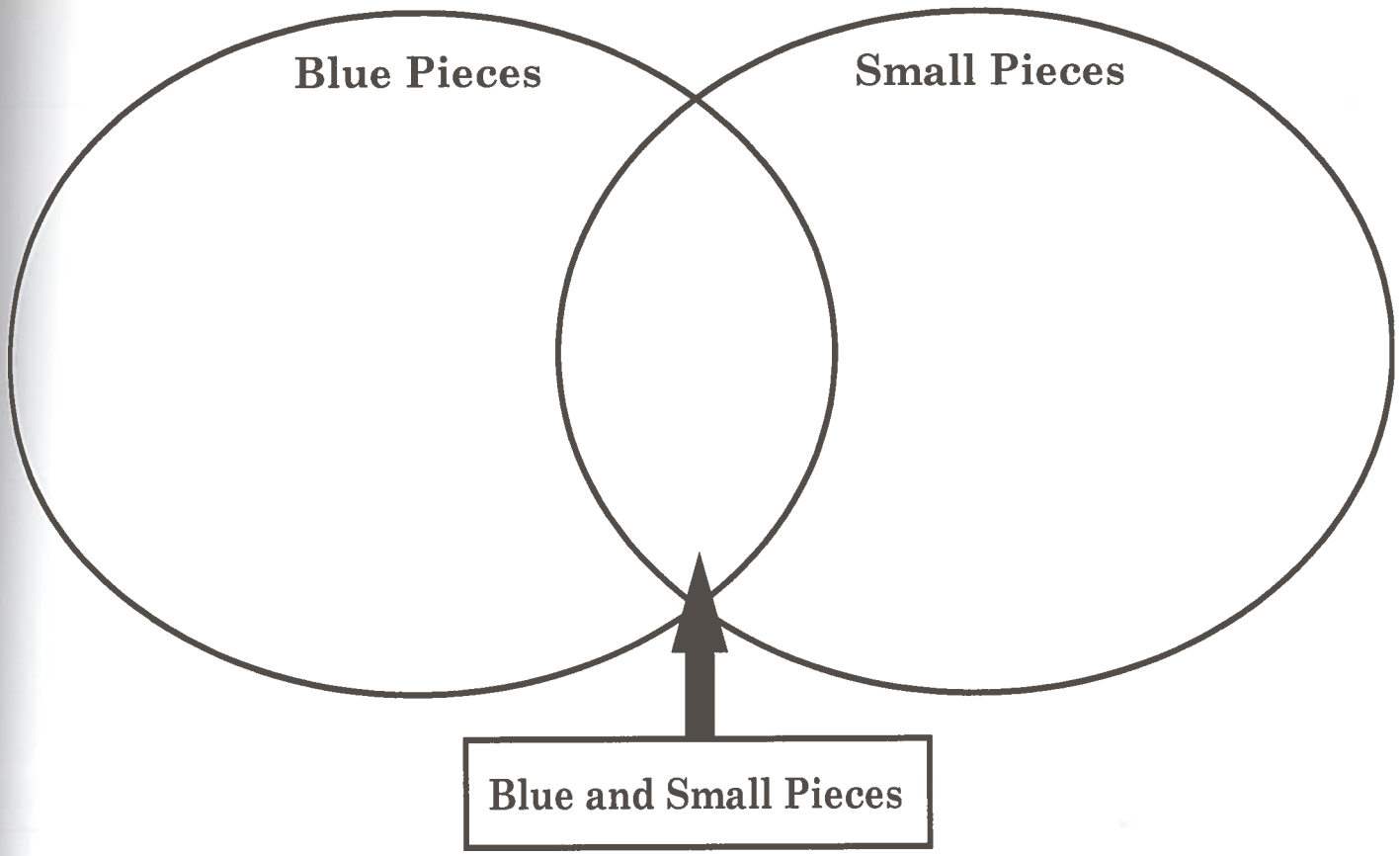
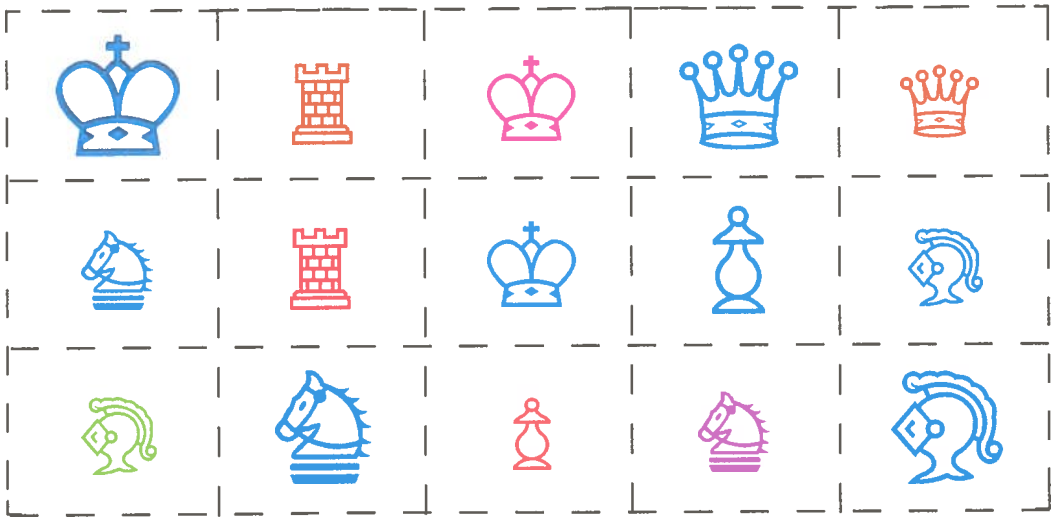
Name_____

Lesson 5.5 Venn Diagram I

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





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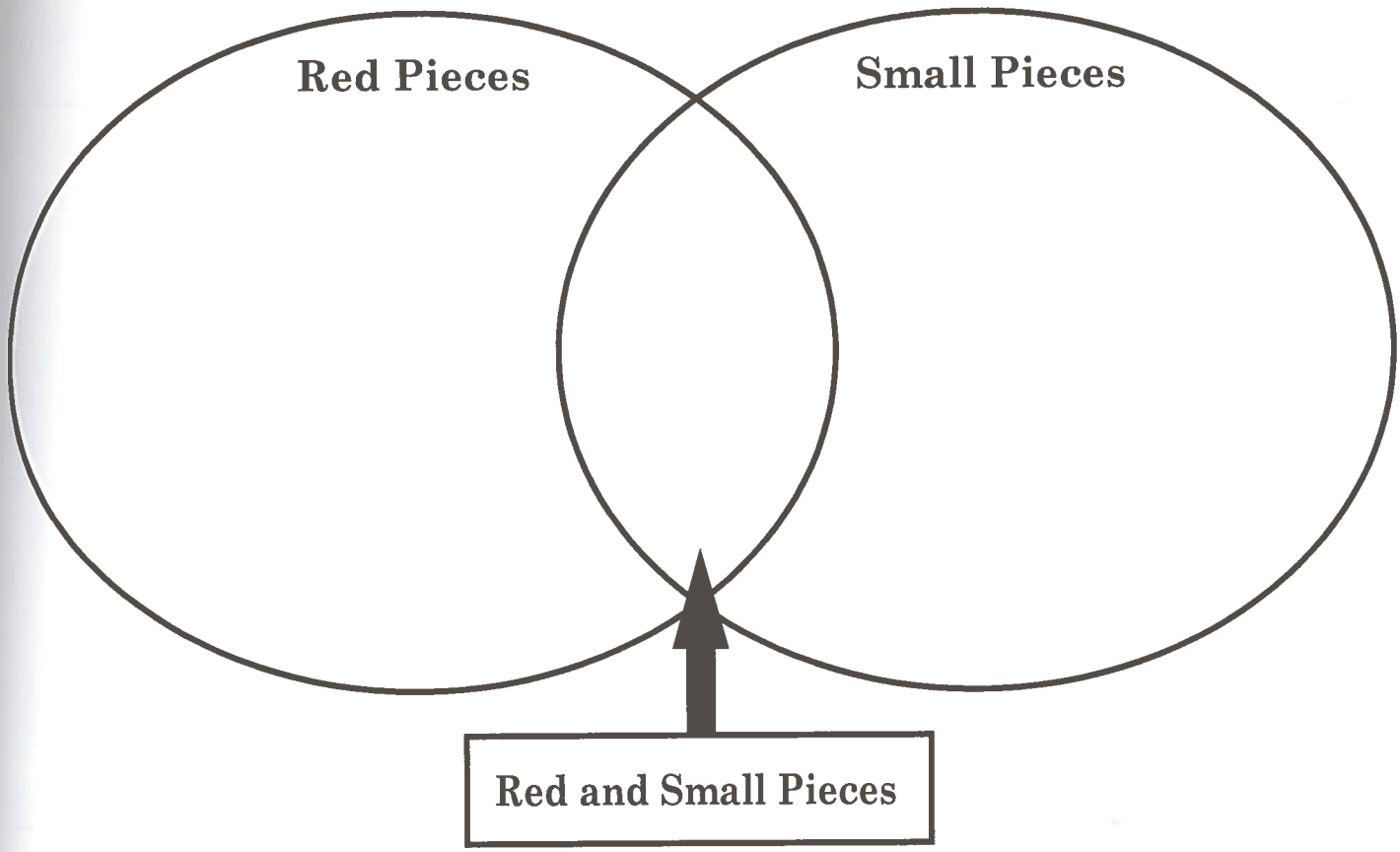
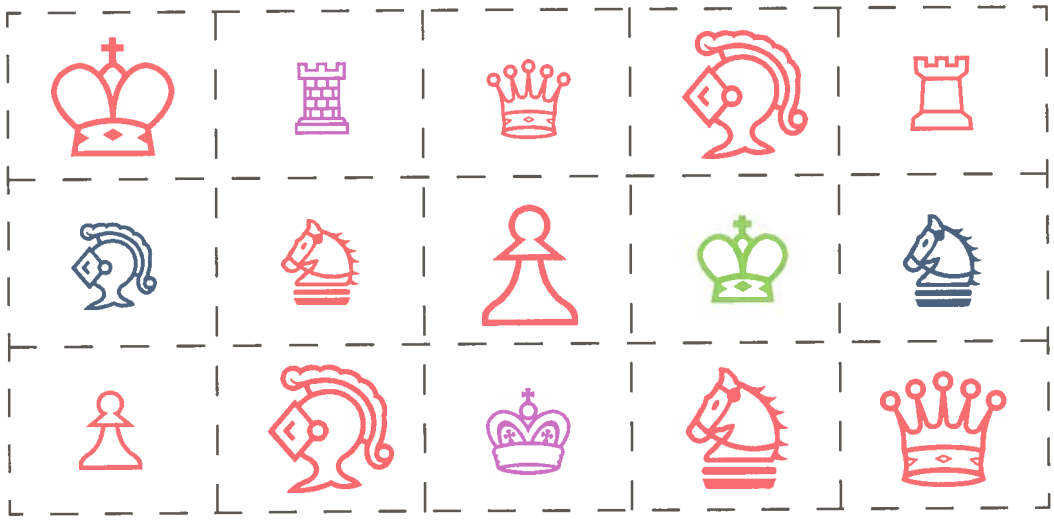
Name _____

Venn Diagram II

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





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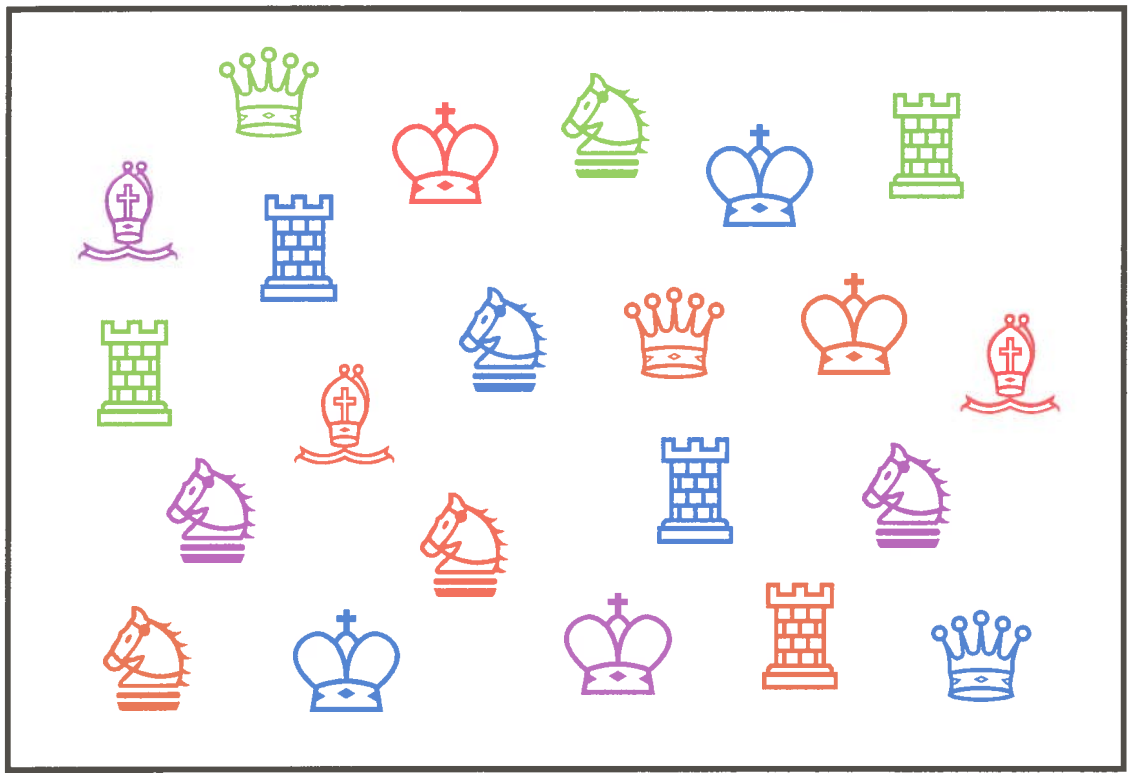
cutting
de.

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?

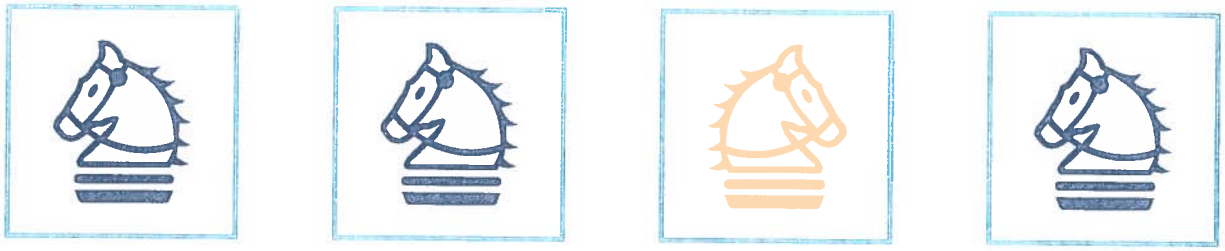
6. How many rooks are there?

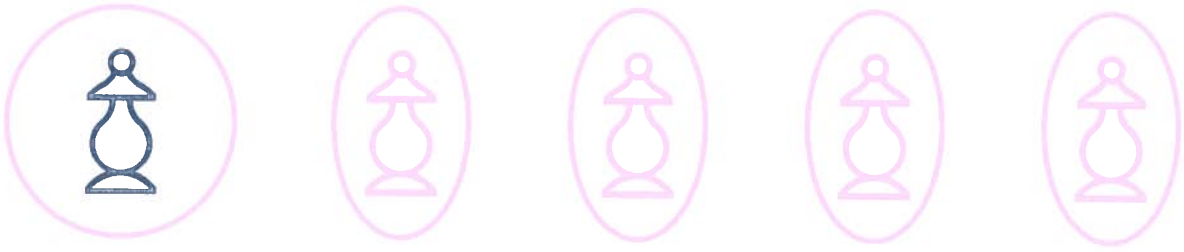
7. How many total pieces are there?

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?

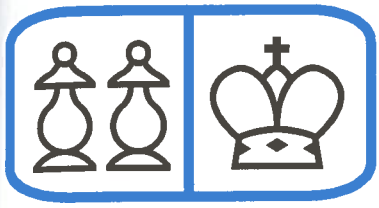


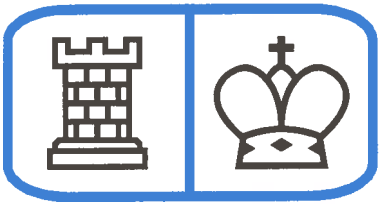


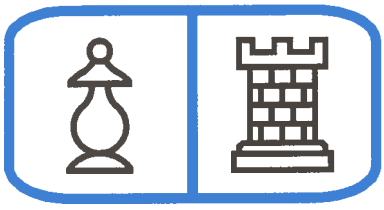
Name_____

Lesson 5.7 Money Matching

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



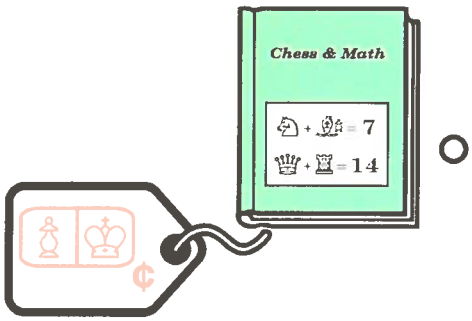


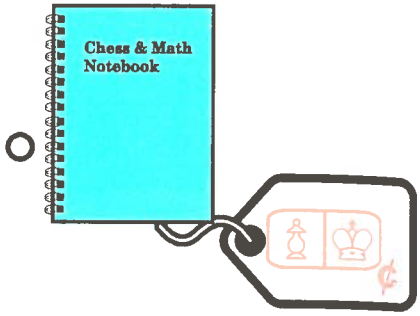


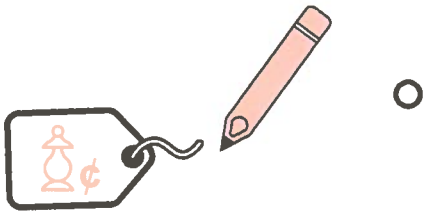
Name_____

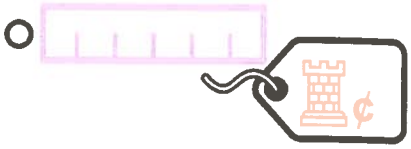
Shopping School Supplies

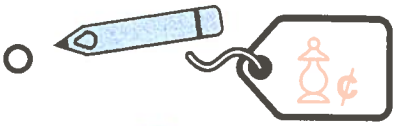
Draw a line to match the price of every object with the coins.

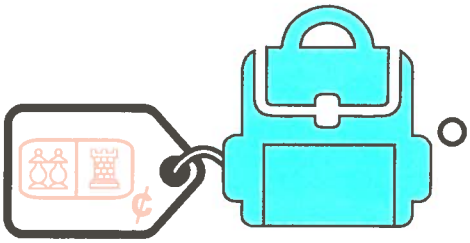


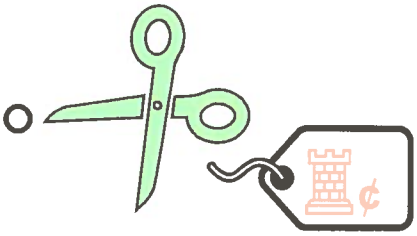








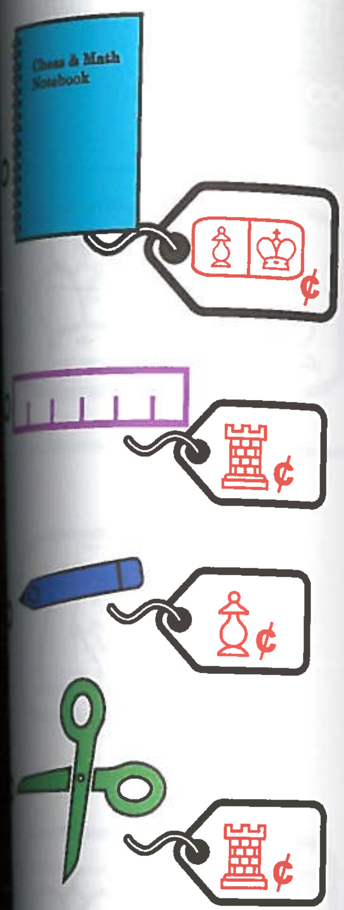




WORD PROBLEM:

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

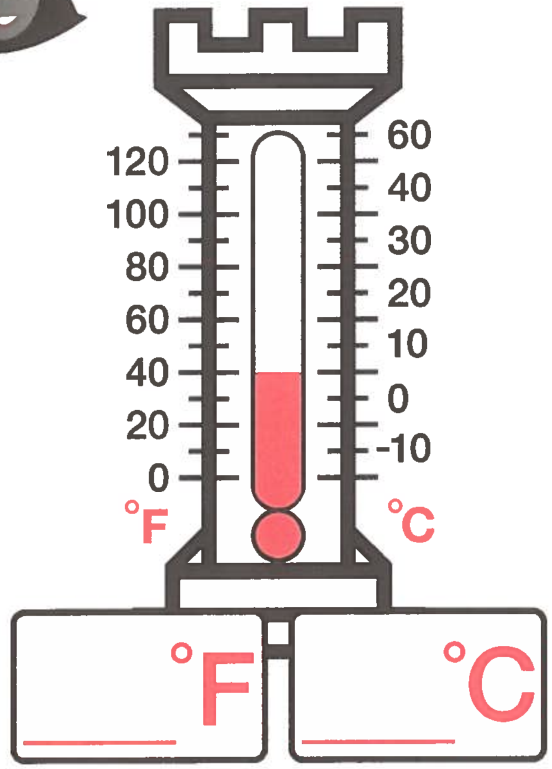


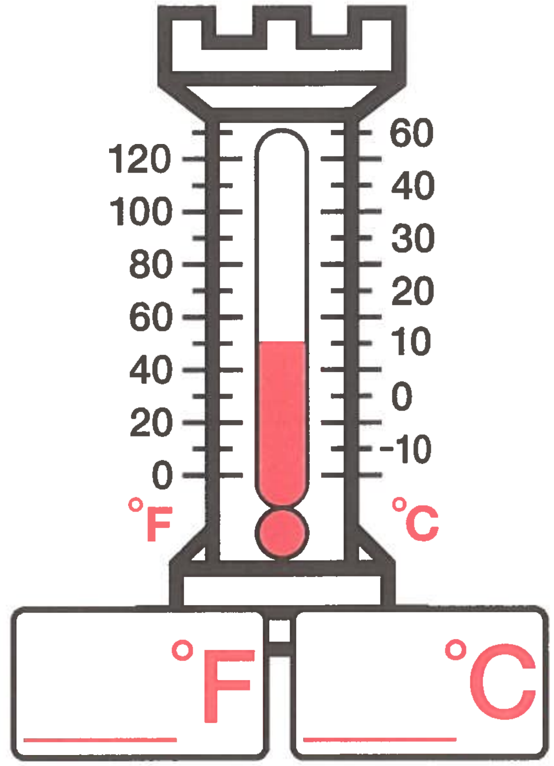
...he have enough money to
...not, how much more money
...your analysis.

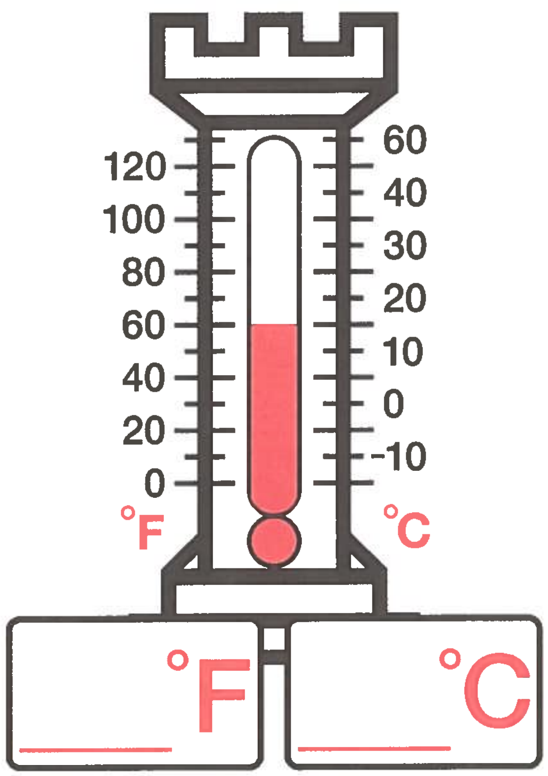
Name______________________________

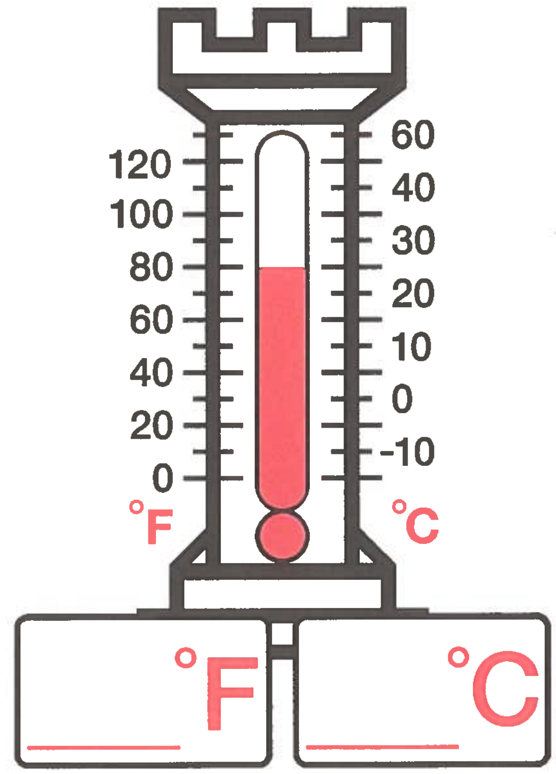
Lesson 5.8 Measuring the Temperature

Write the temperature for each thermometer in Fahrenheit and Celsius.



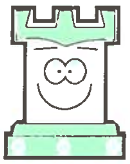




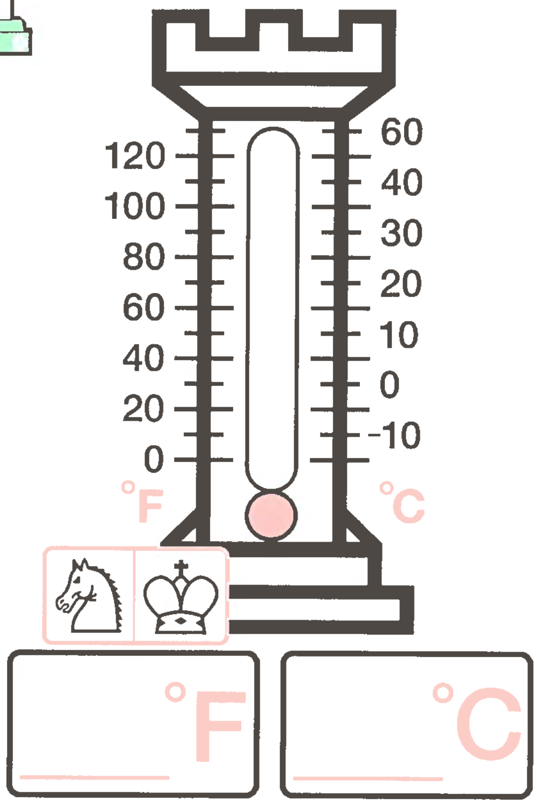


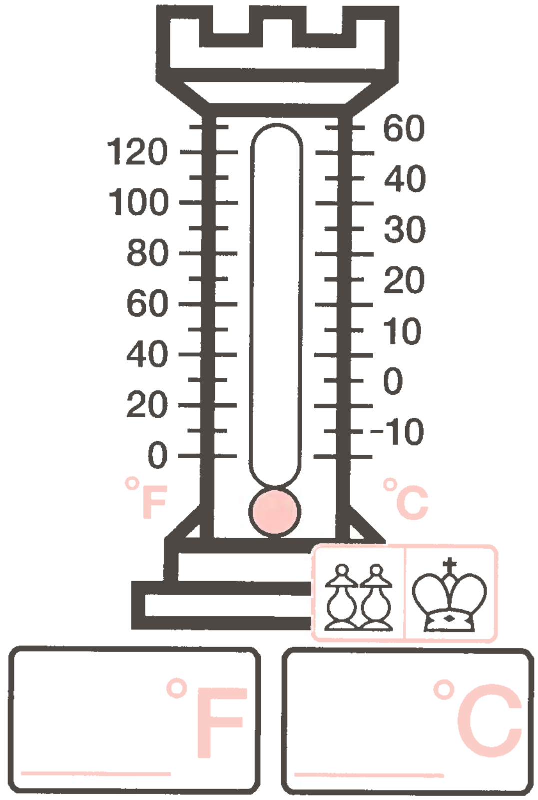
Name___________________________________

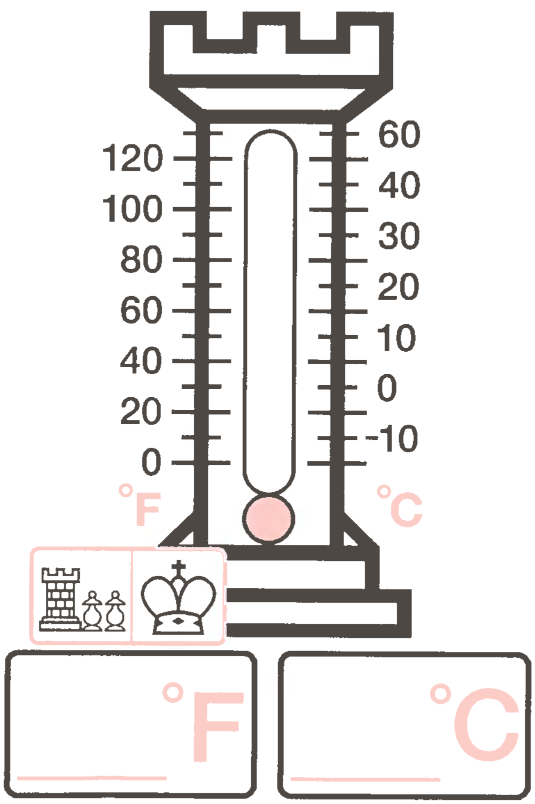
Color the Temperature

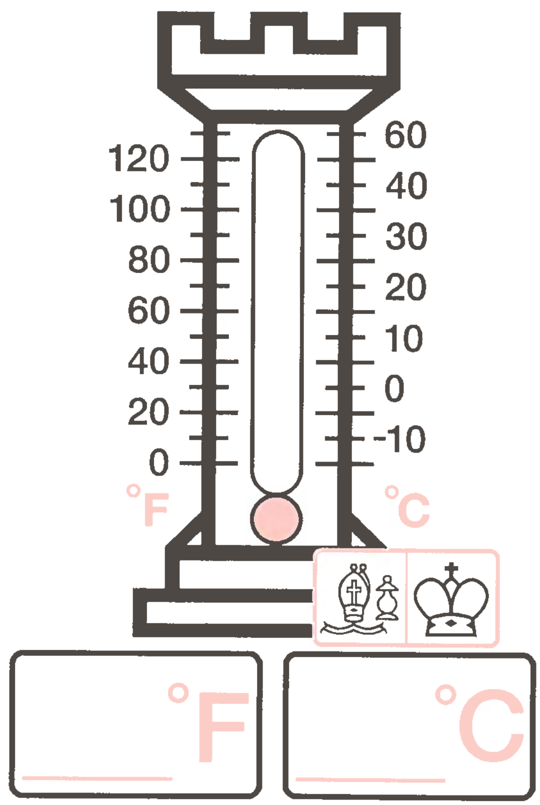


Color and write the temperature that indicates the chess domino for each thermometer in Fahrenheit and Celsius.









CONGRATULATIONS

LEVEL  COMPLETED!

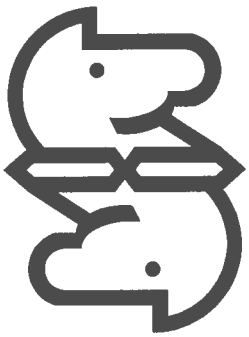
I can describe and compare measurable attributes using the chess ruler.

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

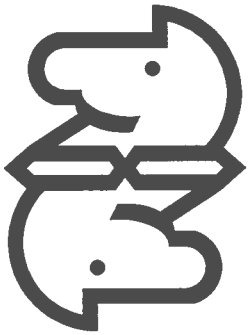
I can use coins to solve mathematical problems.

I can measure the temperature in Fahrenheit and Celsius.

I know how to move the chess bishop.



CHESS 4 MATH



CONGRATULATIONS

LEVEL  COMPLETED!

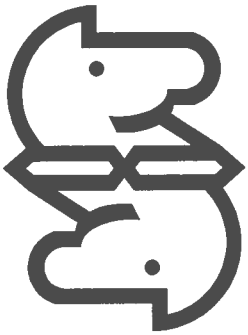
I can describe and compare measurable attributes using the chess ruler.

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

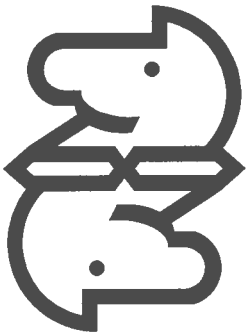
I can use coins to solve mathematical problems.

I can measure the temperature in Fahrenheit and Celsius.

I know how to move the chess bishop.



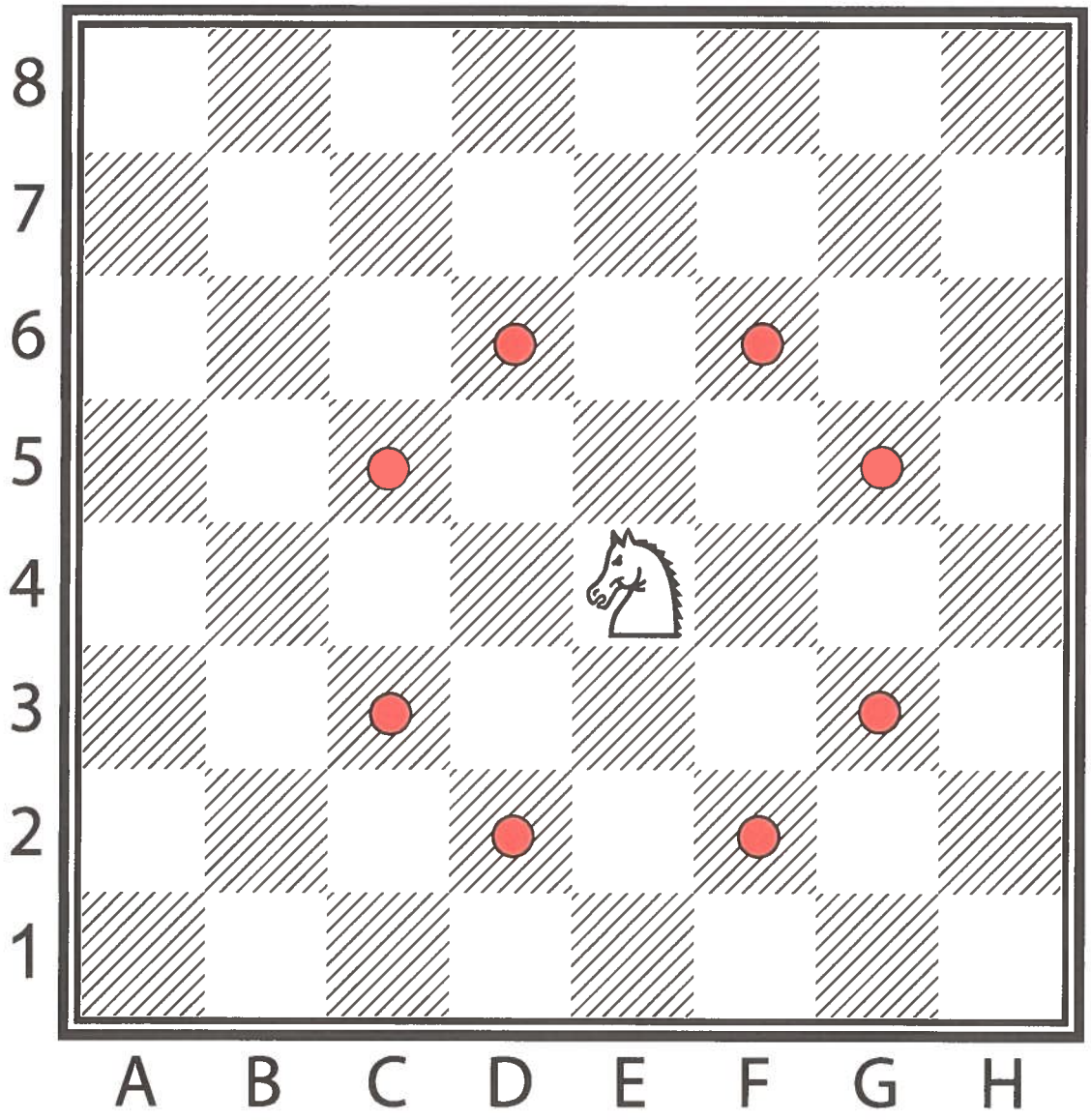
CHESS 4 MATH



THE KNIGHT

Hi friends!

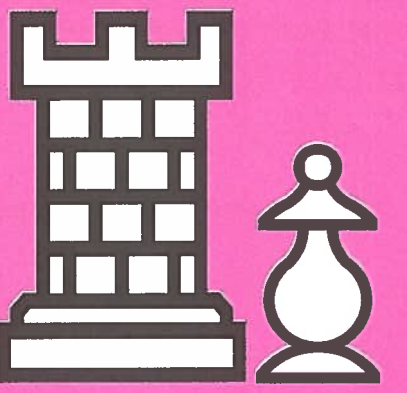
I am the Knight, and I move two squares in one direction and one on the side, like an L shape. I am the only piece that can jump over the rest of the pieces. My numerical value is 3.



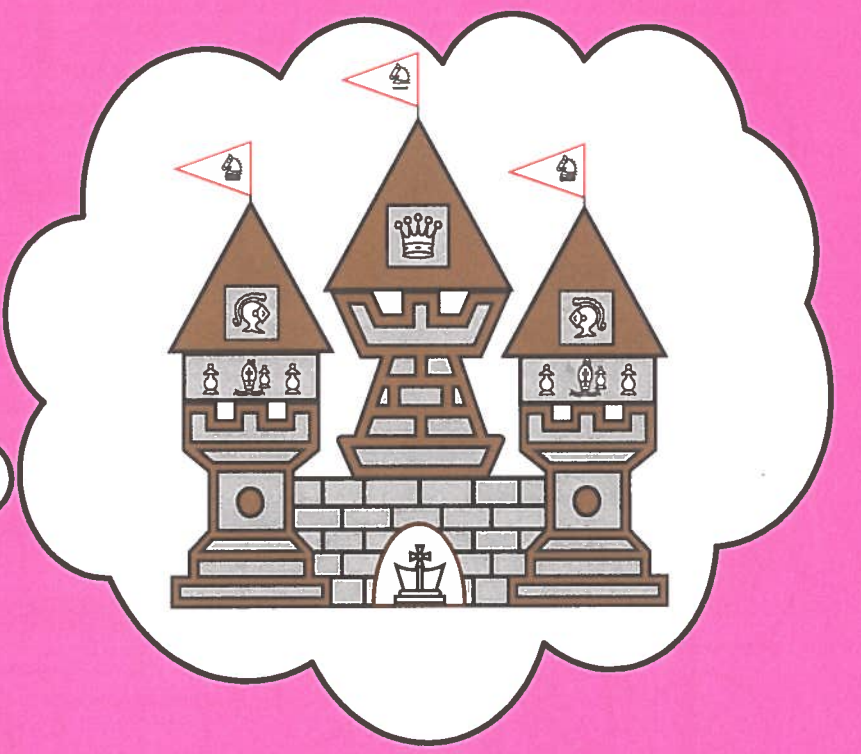
d one on the side, like an
he pieces. My numerical

G H

CHAPTER



Geometry



Identify and describe shapes.

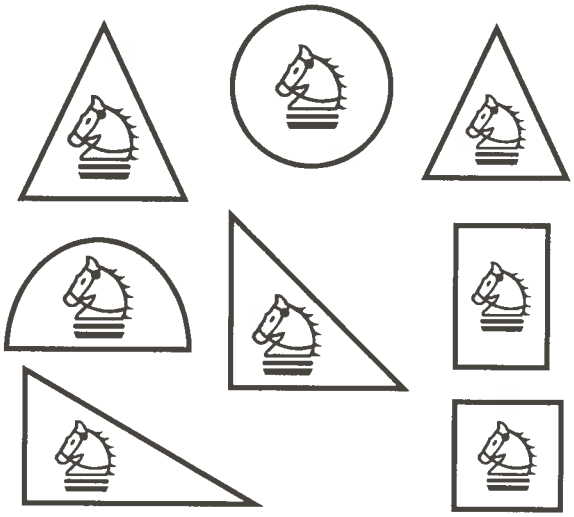
Name_____

Lesson 6.1 Identify Shapes & Pieces

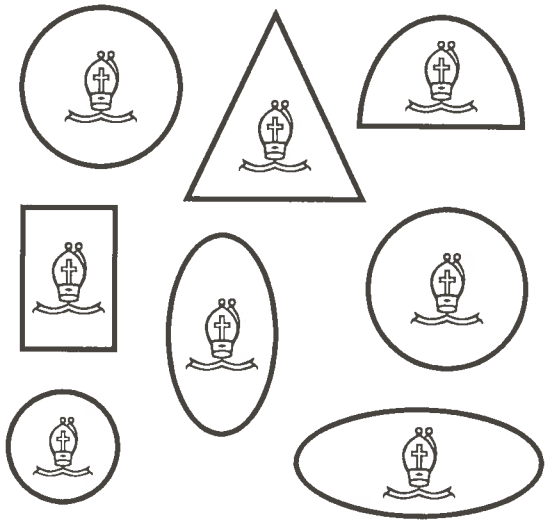
Common Core
K.G.A.1, K.G.A.2, K.G.A.3
MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8.

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

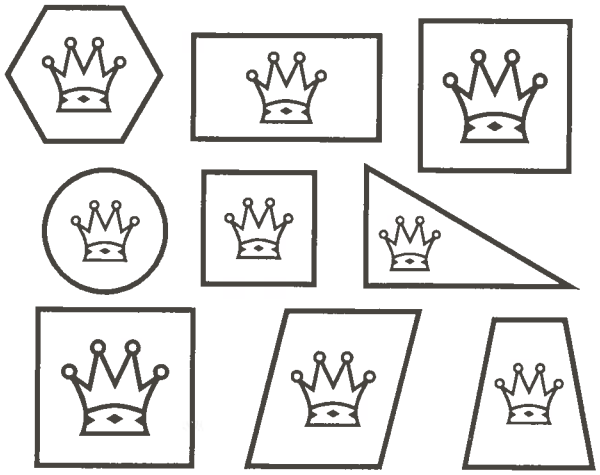
Color the triangle knights red



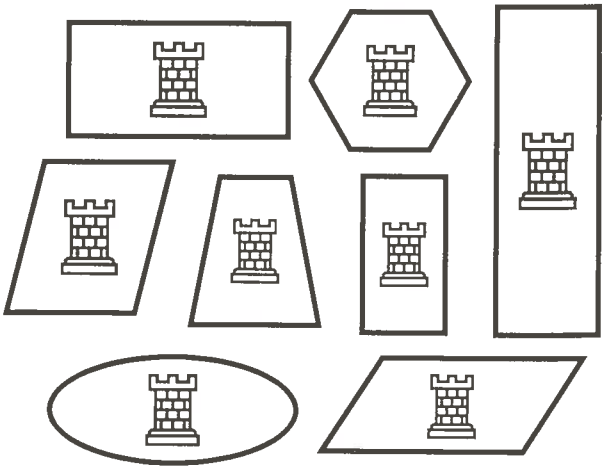
Color the circle bishops blue



Color the square queens green



Color the rectangle rooks purple



Name_____

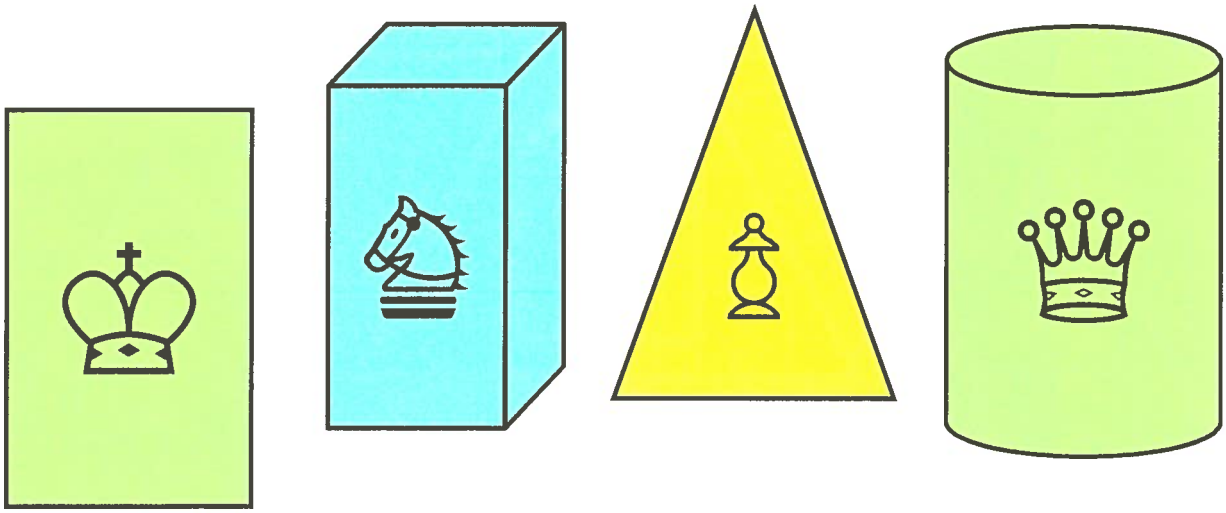
Castle Kingside

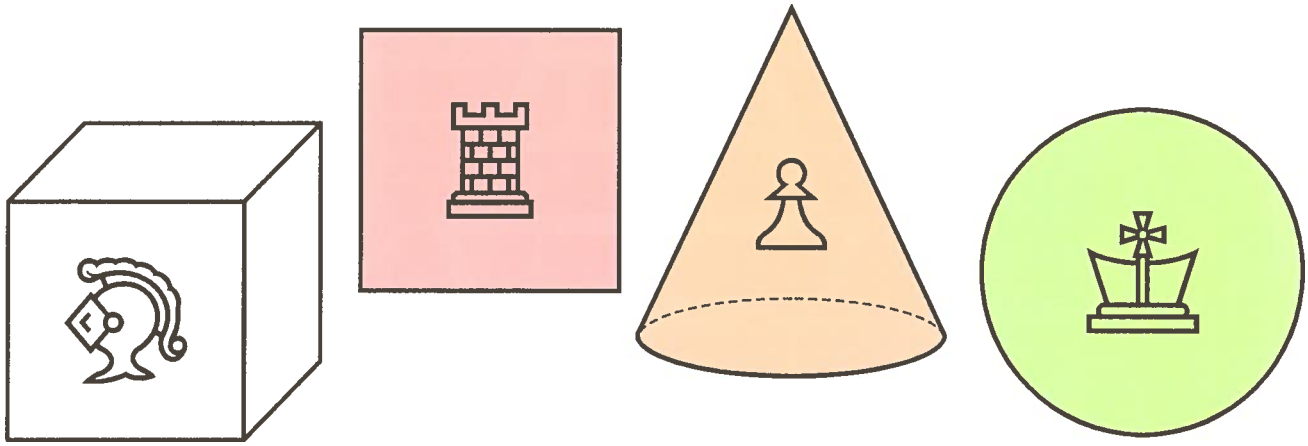
Look at the king's castle and identify squares, triangles, rectangles, circles and semicircles. Use one color for each type of shape to color the castle.

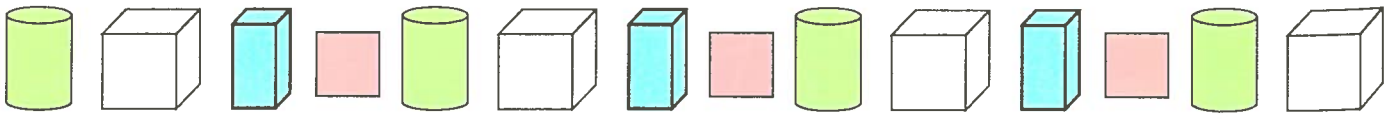
Name_____

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.







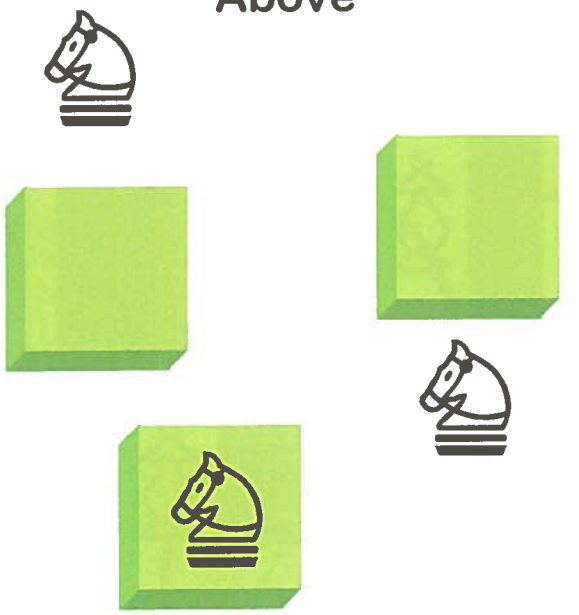
the "flat" shapes and cross
terns on the top and bottom

Name_____

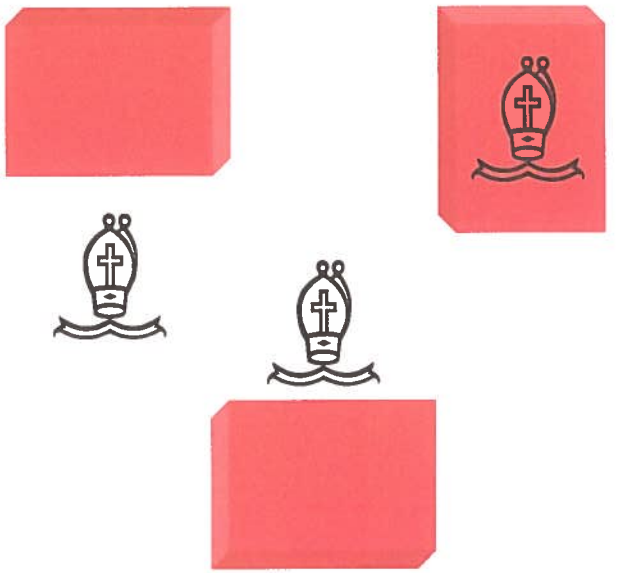
Where Am I? Above, Below, In Front of, Behind

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

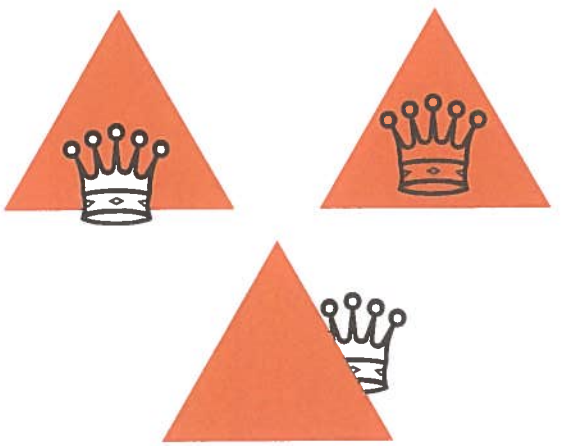
Above



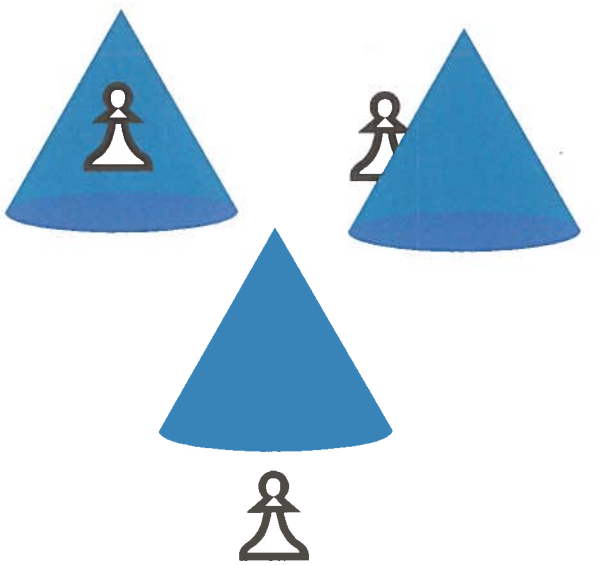
Below



In front of

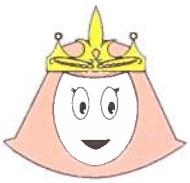


Behind



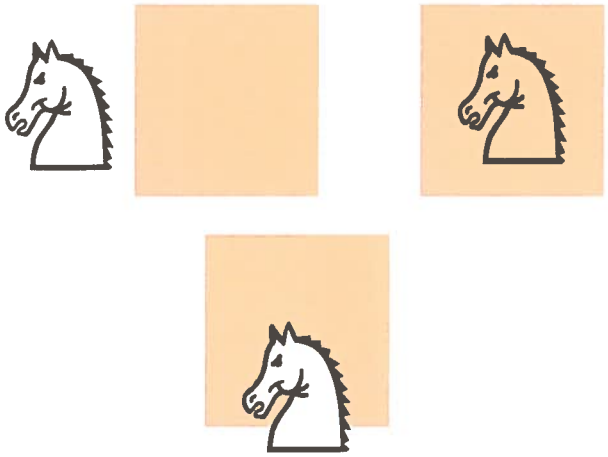
Name_____

Where Am I? Beside, Between, Over, On

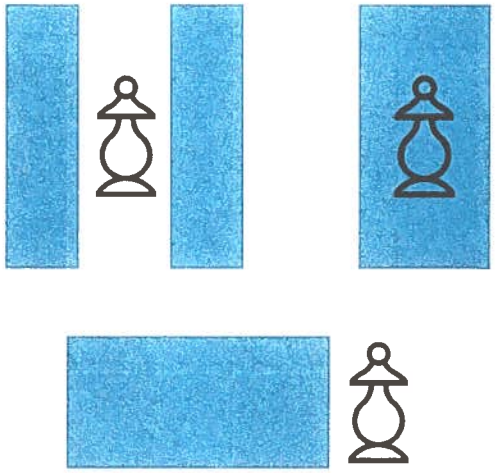


Look at the pieces and shapes below. Depending on the instruction for each case, circle one piece.

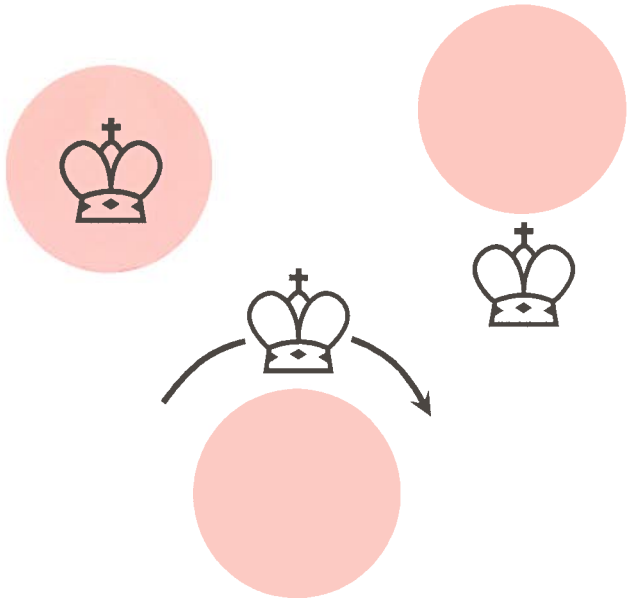
Beside



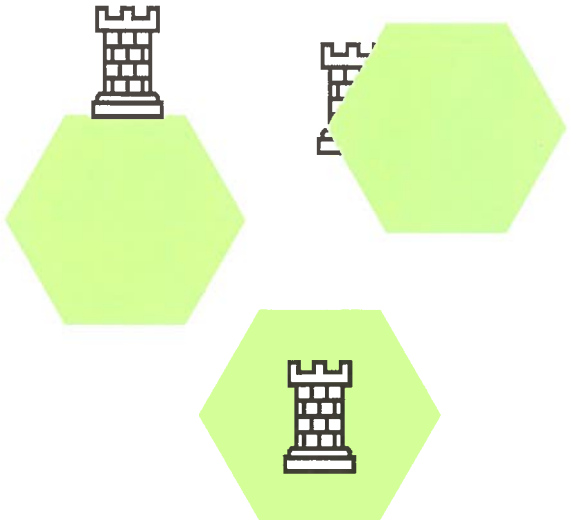
Between



Over



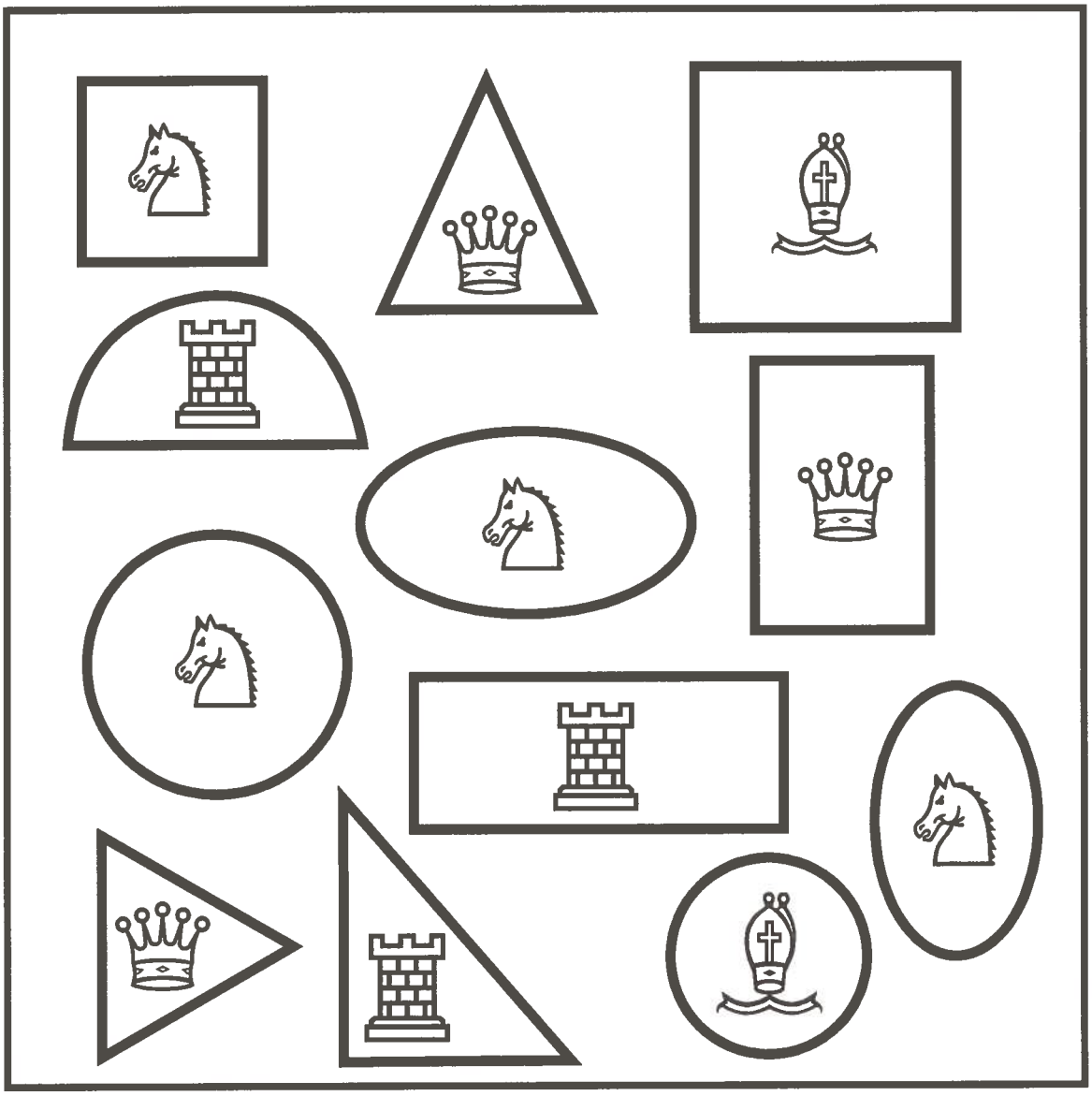
On



Name_____

Lesson 6.3 Recognizing Shapes & Pieces

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

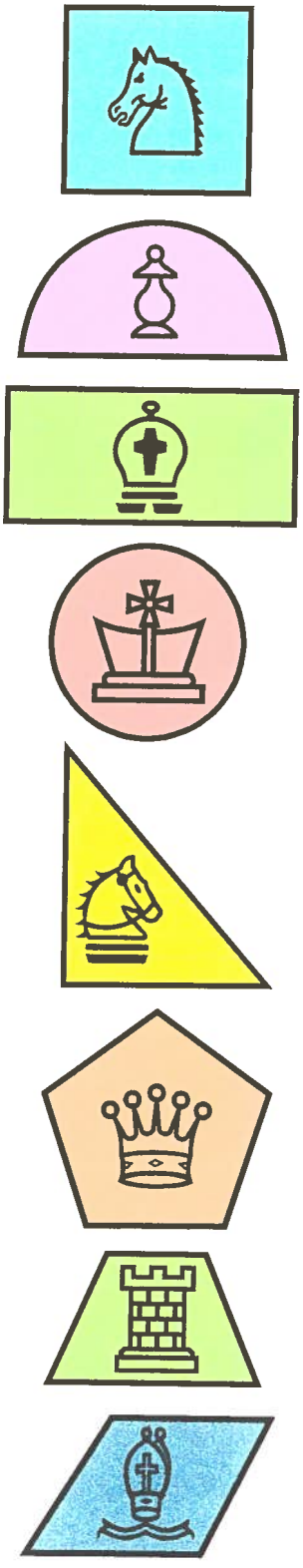


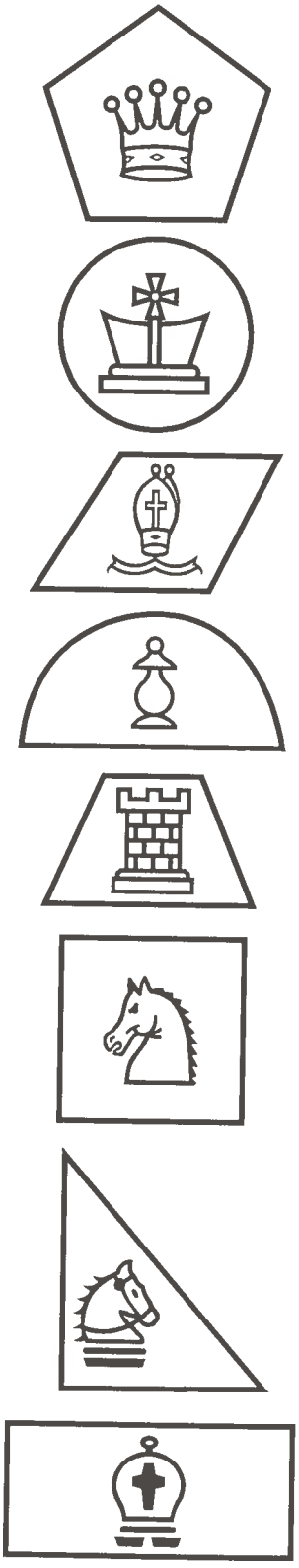
1. Color the triangle queen red.
2. Color the rectangle queen blue.
3. Color the oval knight pink.
4. Color the square knight green.
5. Color the circle knight orange.
6. Color the square bishop purple.
7. Color the circle bishop grey.
8. Color the triangle rook yellow.
9. Color the rectangle rook brown.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

Name_____

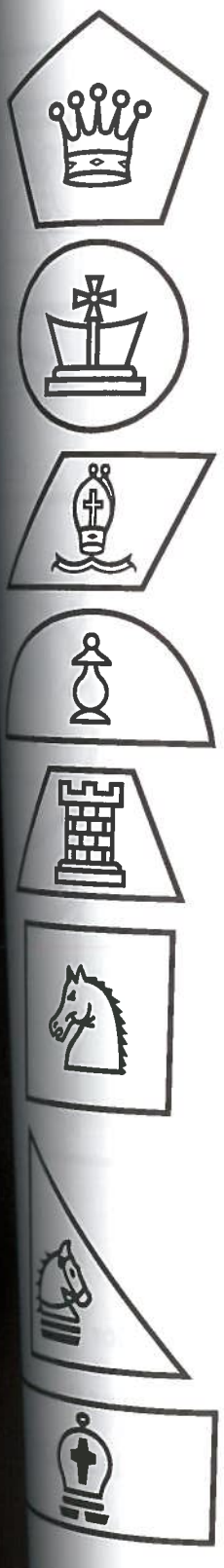
Matching Shapes

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.





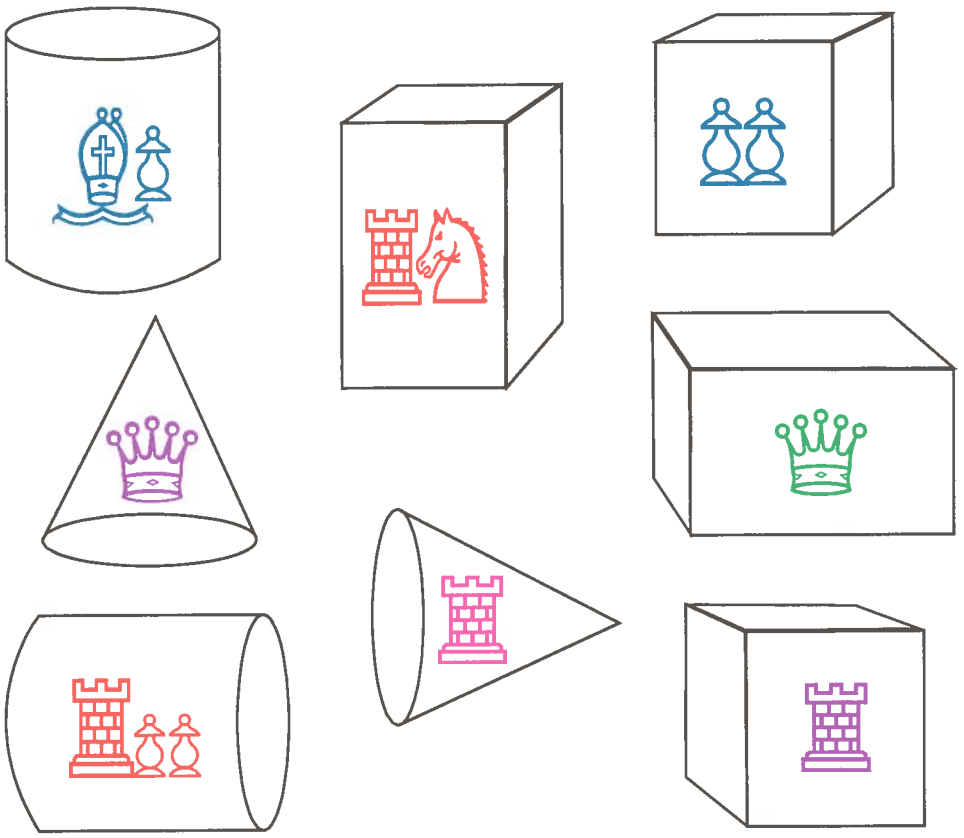
the right side.



Name_____

Identify and Add Shapes

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

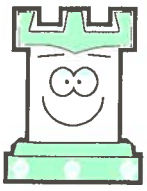
____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

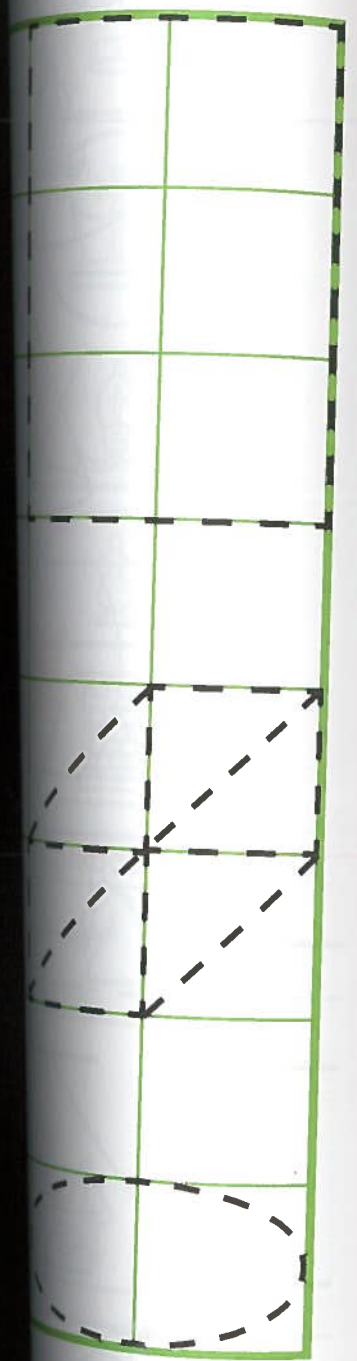
Name_____

Lesson 6.4 Geometry On the Chessboard



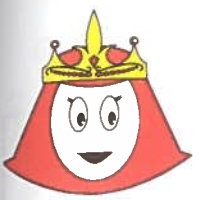
Identify and trace the shapes below.
Color the "flat shapes" red, and color the "solid shapes" blue.

blue.

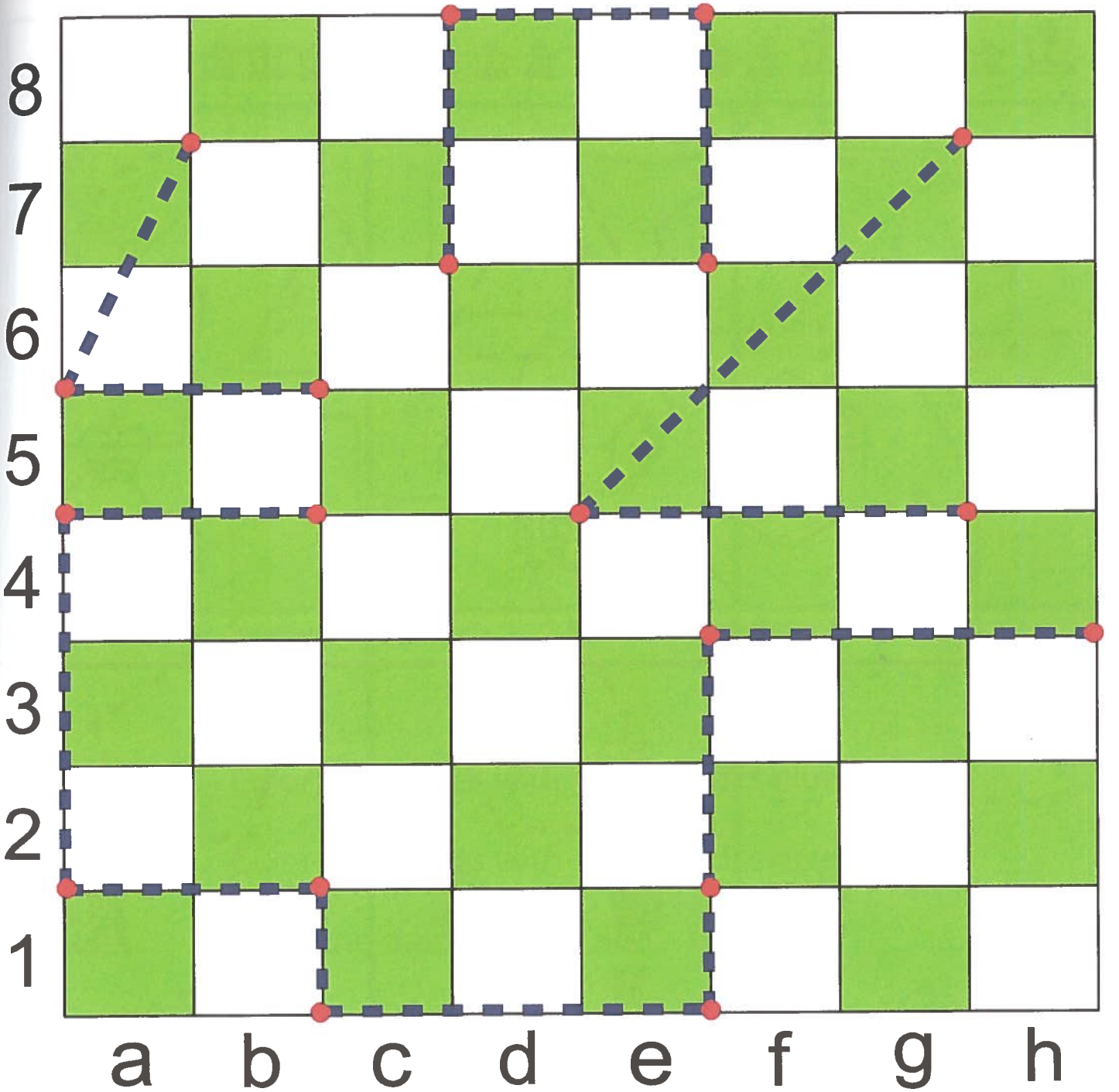


Name_____

Making Shapes



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



Analyze, compare, and compose shapes.

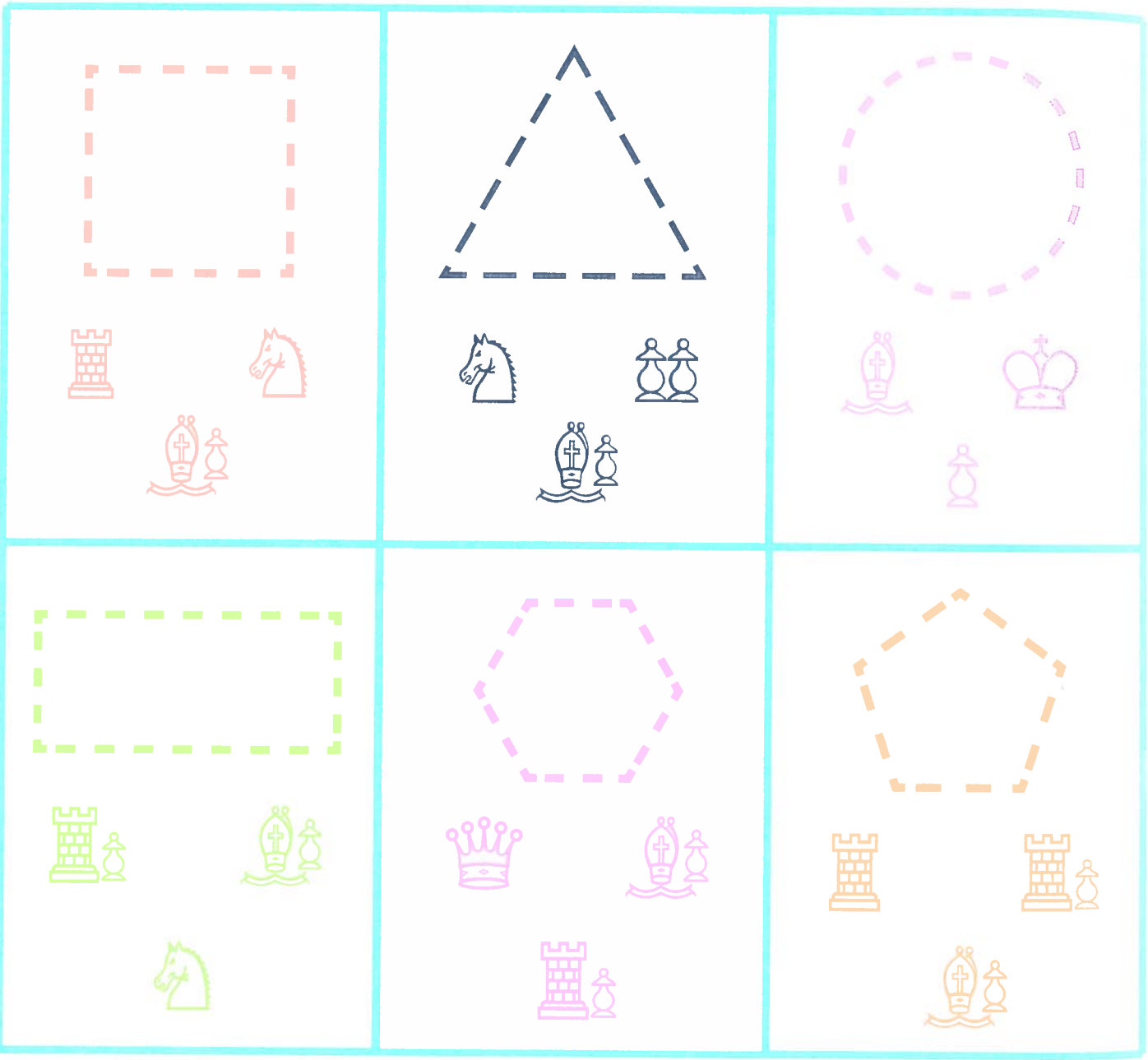
Name_____

Lesson 6.5 Sides and Vertices

Common Core

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

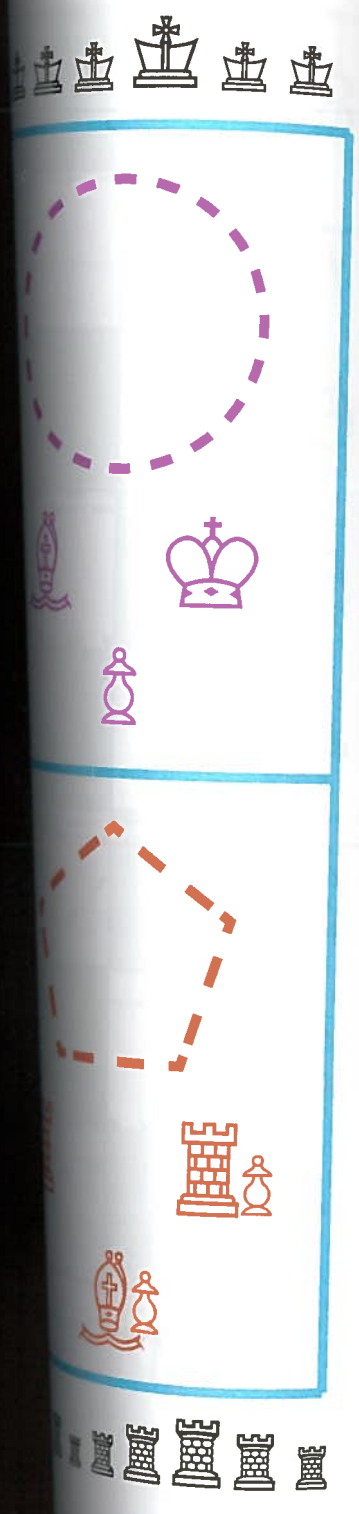
Trace the shapes below. Then, circle the chess pieces that represent the number of sides and vertices. Look for the patterns.



...pes.

Common Core

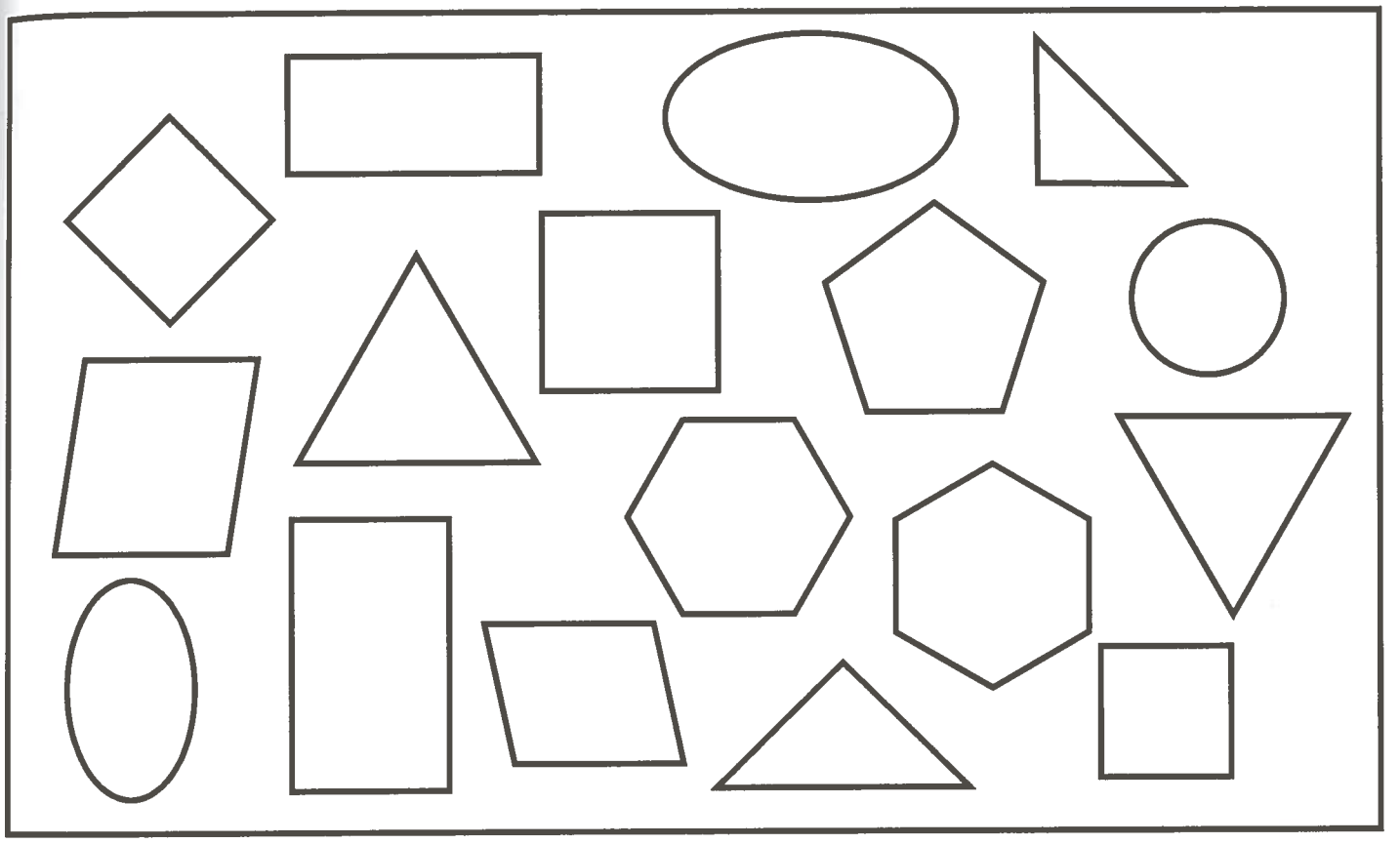
K.G.B.4 , K.G.B.5 , K.G.B.6
MP1, MP2, MP3, MP4, MP5,
MP6, MP7, MP8.



Name_____

Identify and Color Shapes

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



Color the shapes with  sides blue.

Color the shapes with  sides green.

Color the shapes with  sides red.

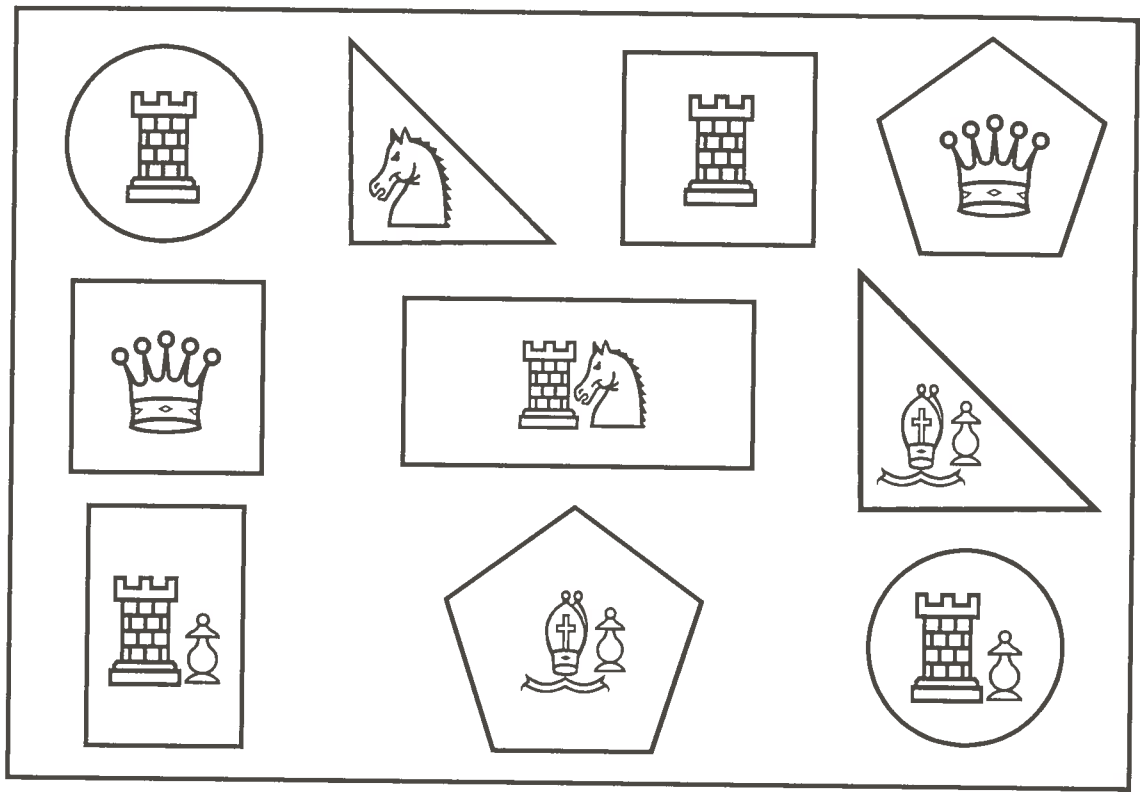
Color the shapes with  sides purple.

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

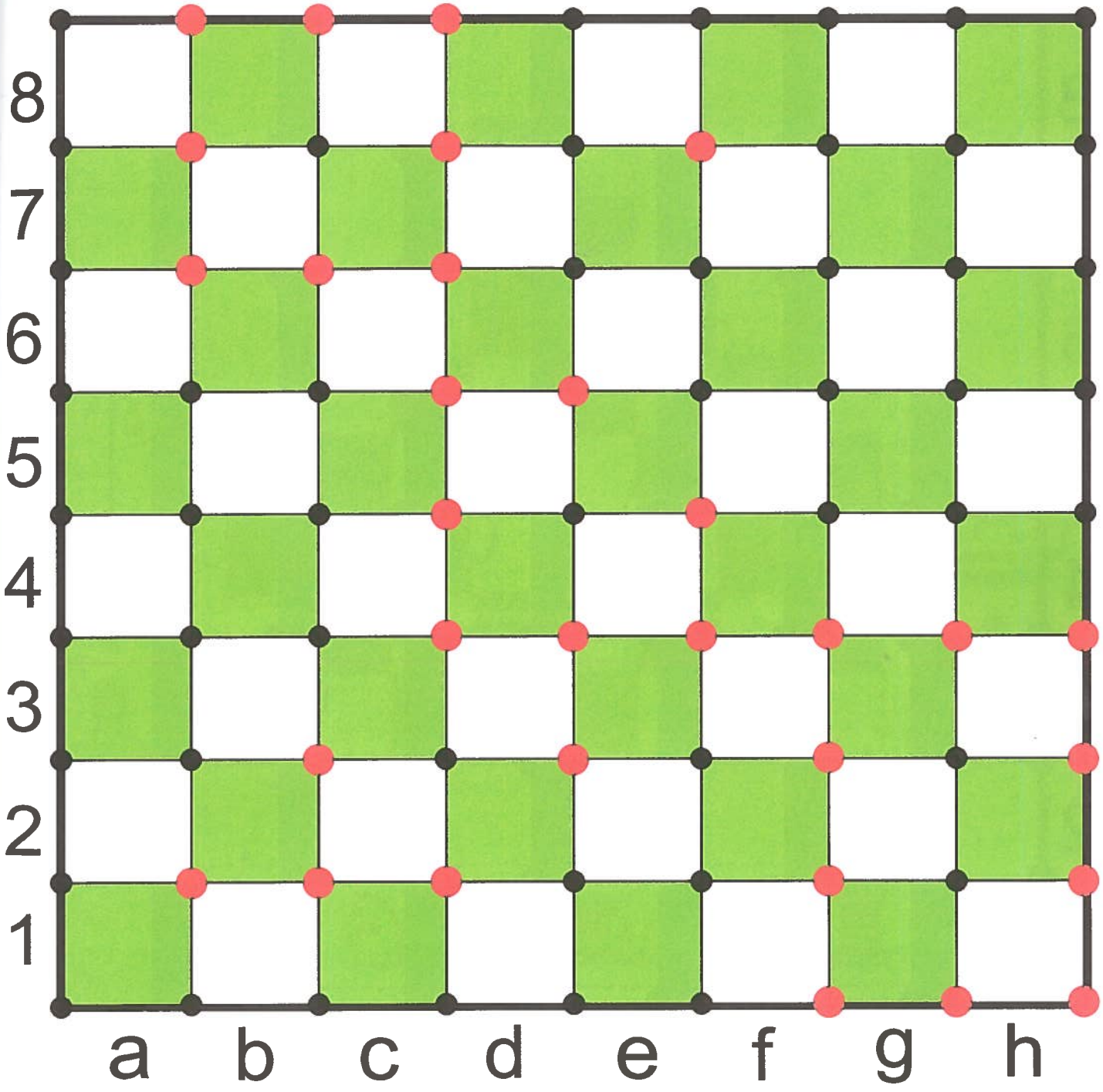
Triangles

Pentagons

Name_____

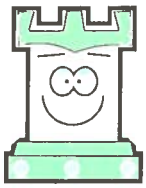
Composing Shapes I

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

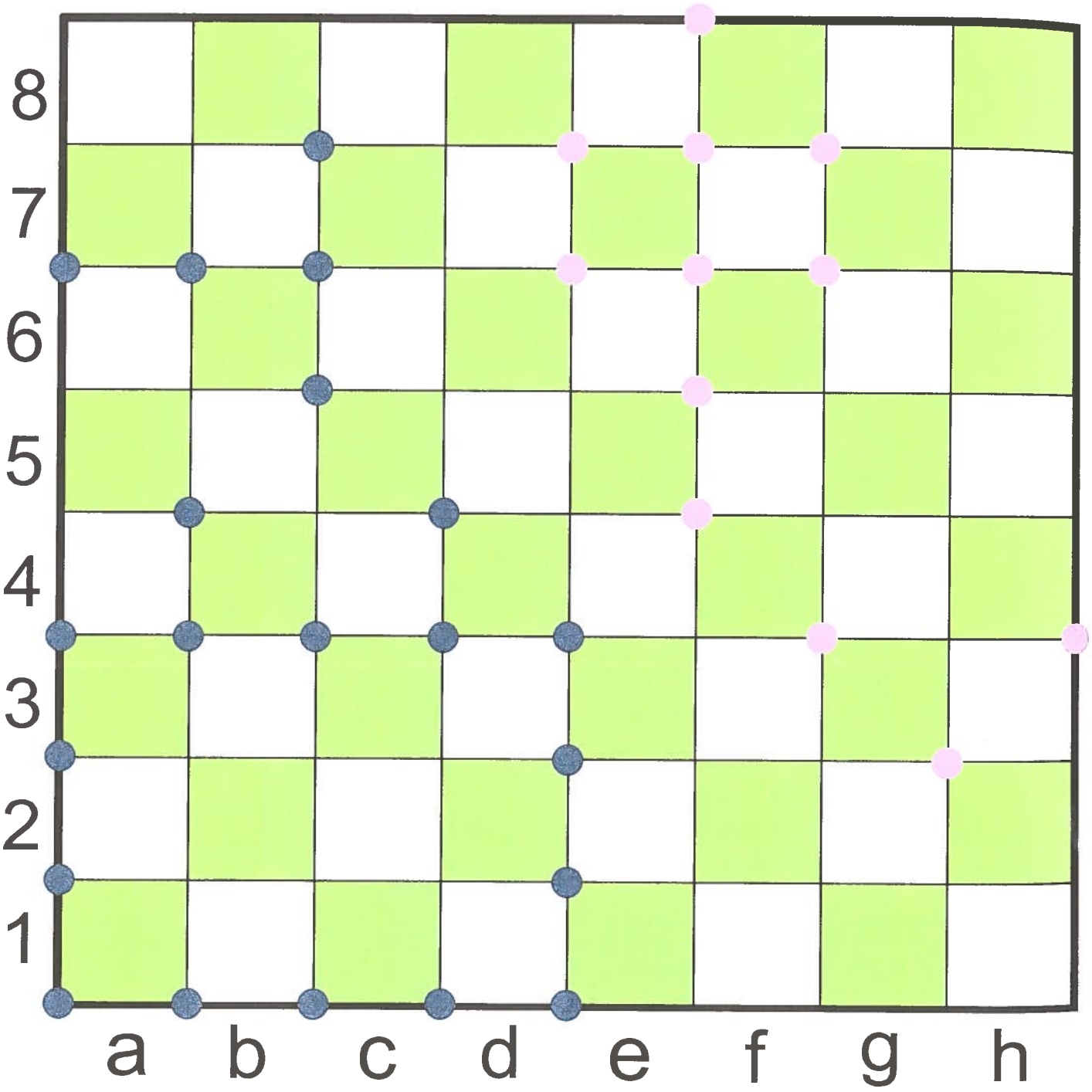


Name_____

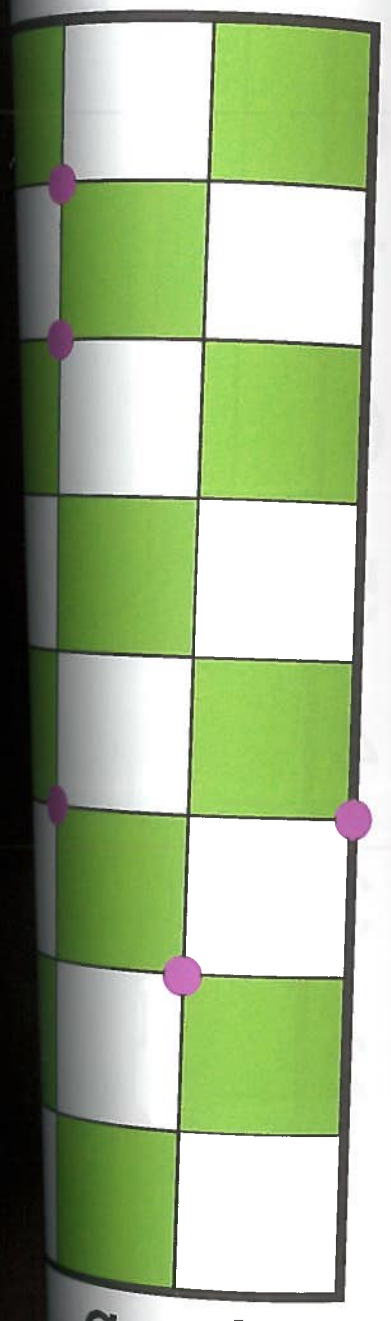
Lesson 6.7 Composing Shapes II



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



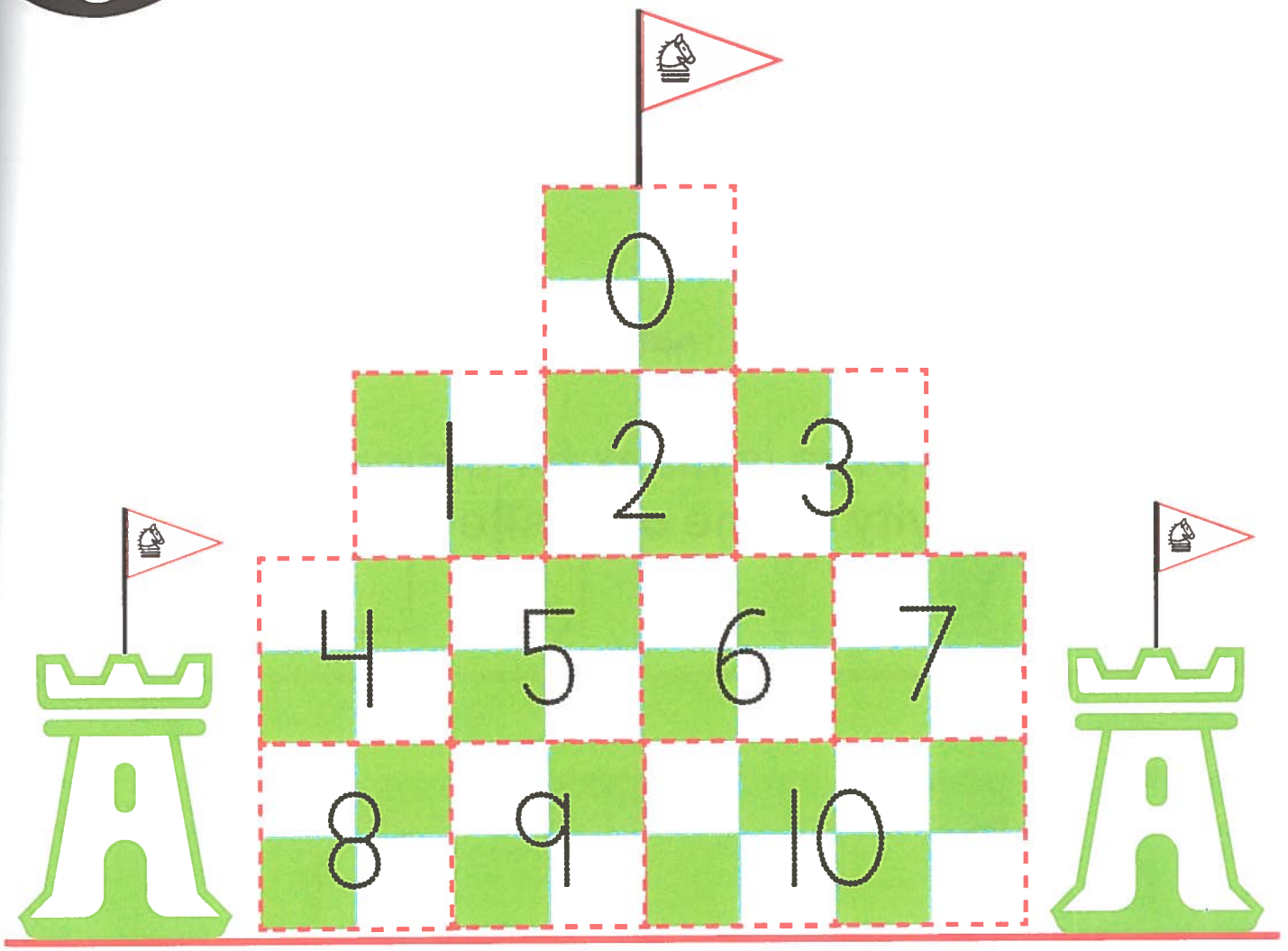
arately connect the
d them.

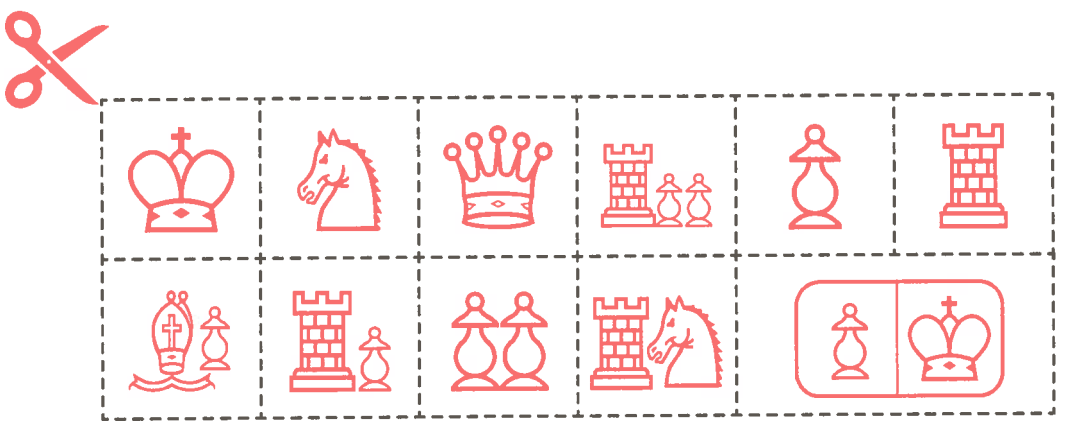


Name_____

Castle Queenside

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?



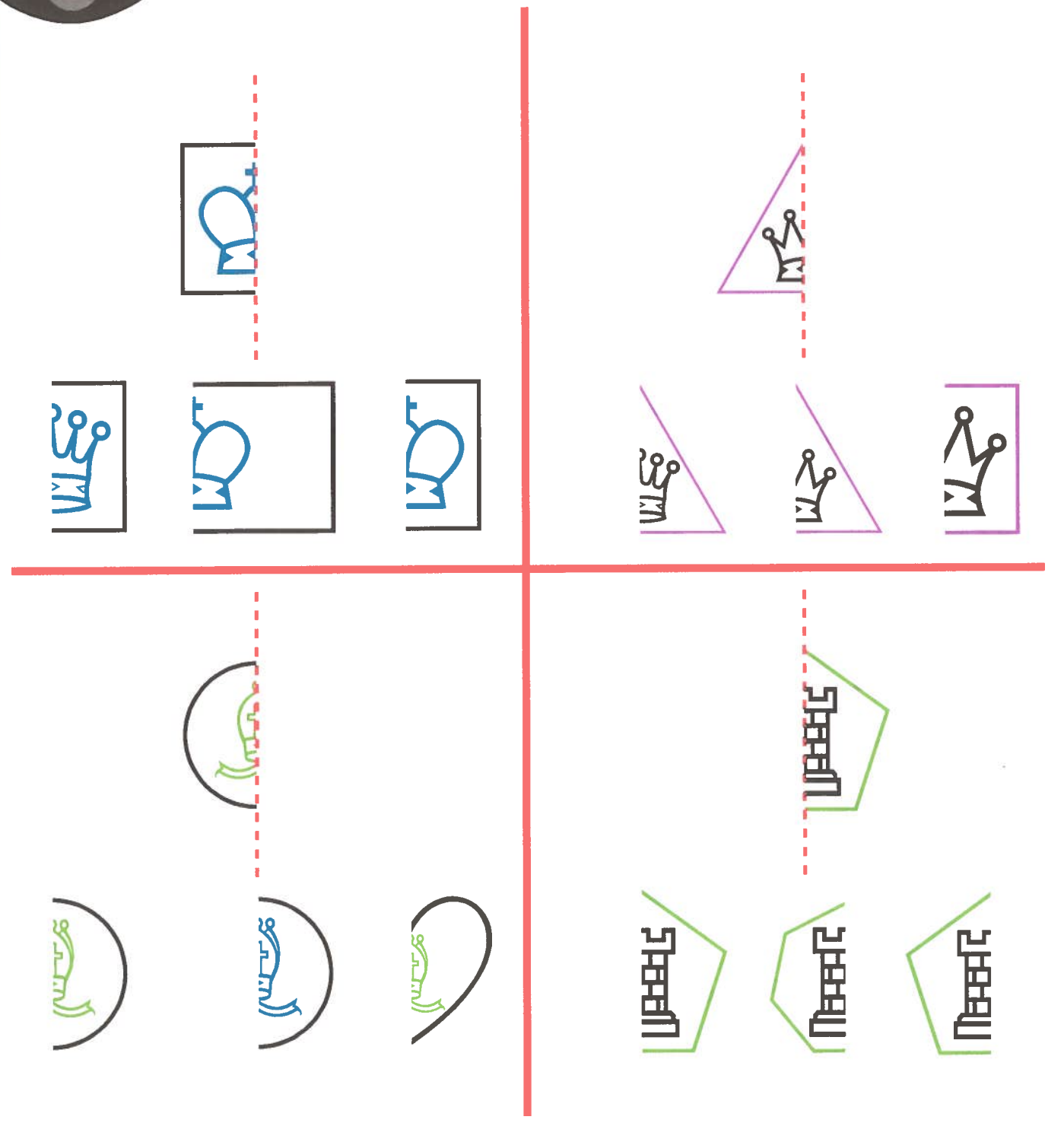


This page is blank for the cutting activity on the opposite side.

Name_____

Lesson 6.8 Completing Shapes

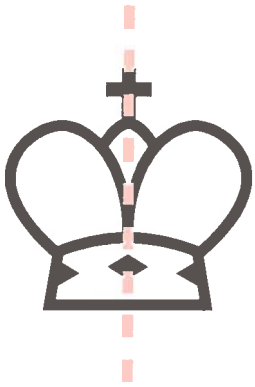
Circle the half that completes the picture. Pay close attention to the shape and the chess piece inside.

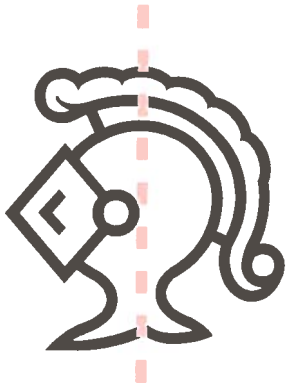


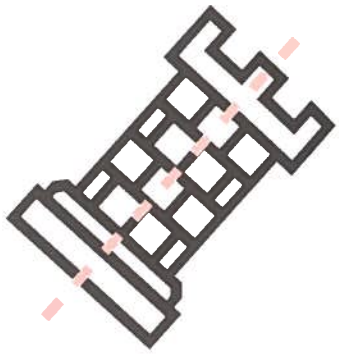
Name_____

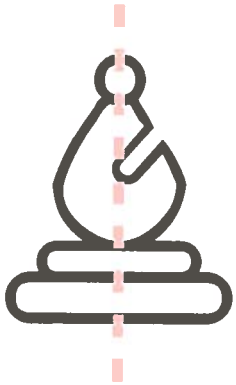
Symmetrical Shapes

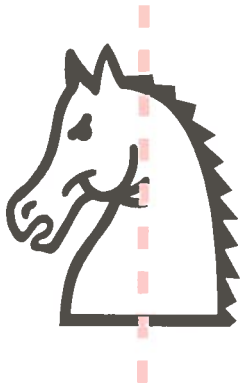
Look at the pieces below. Circle the pieces that have symmetry.

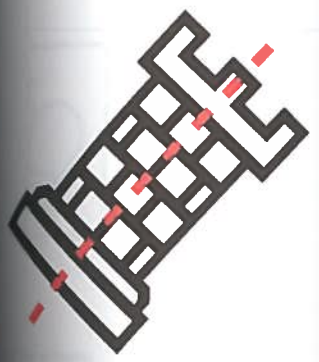












CONGRATULATIONS

level COMPLETED!

I can identify and describe shapes.

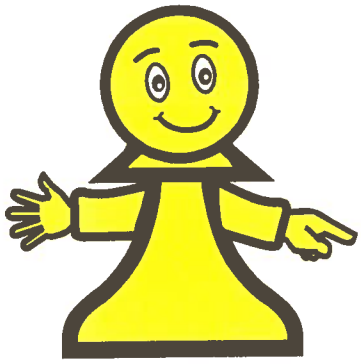
I can analyze, compare, create, and compose shapes using the chessboard.

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.

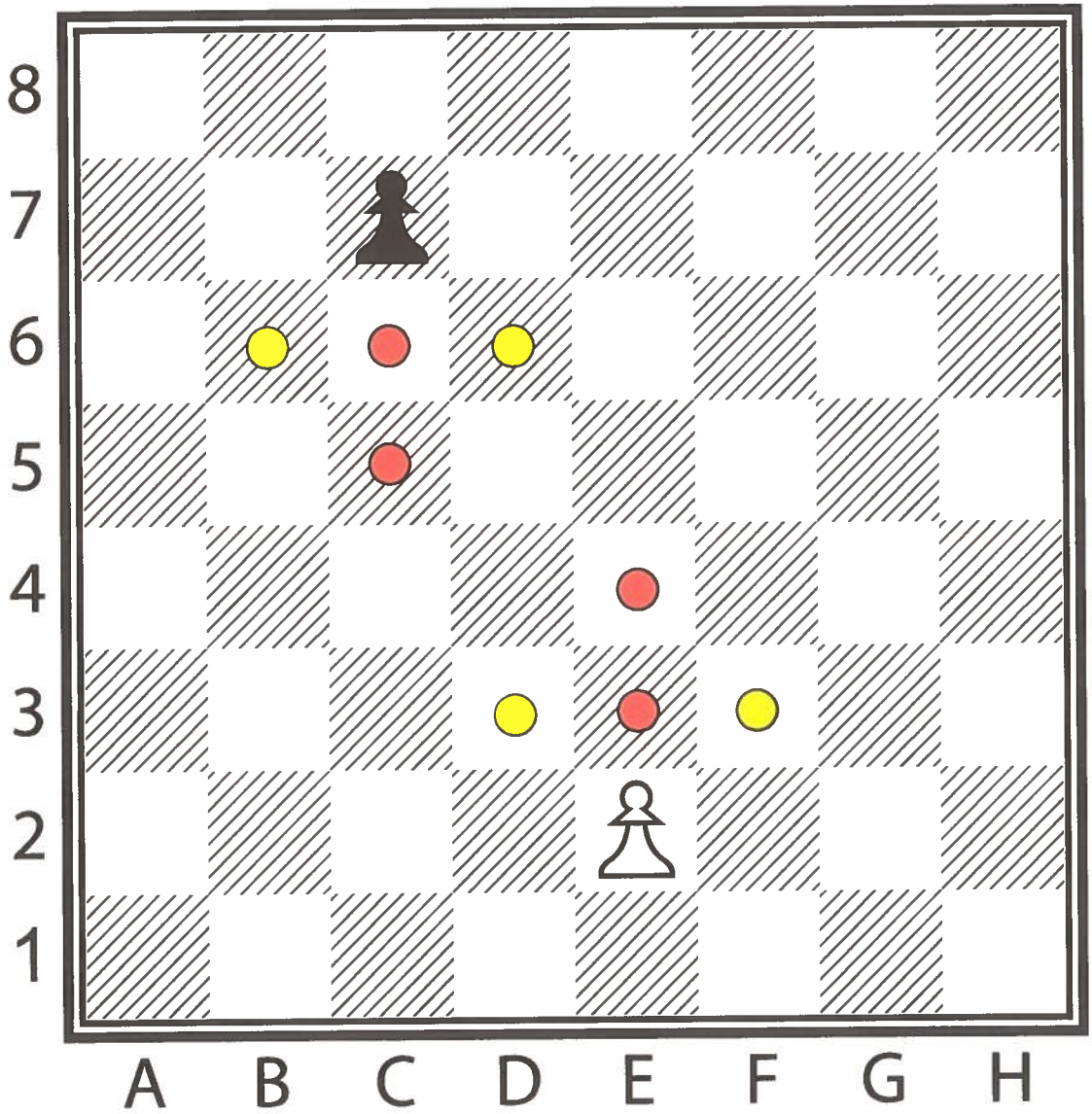
CHESS 4 MATH



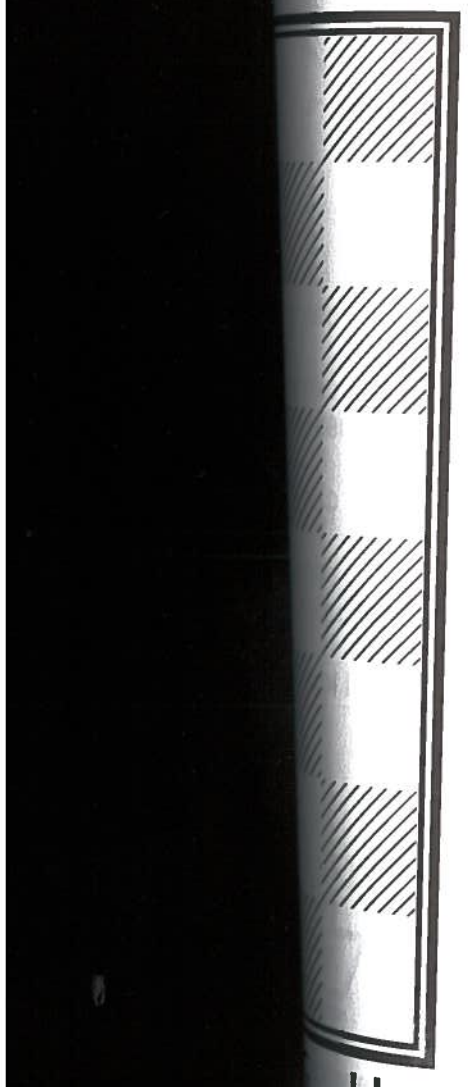
THE PAWN

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.

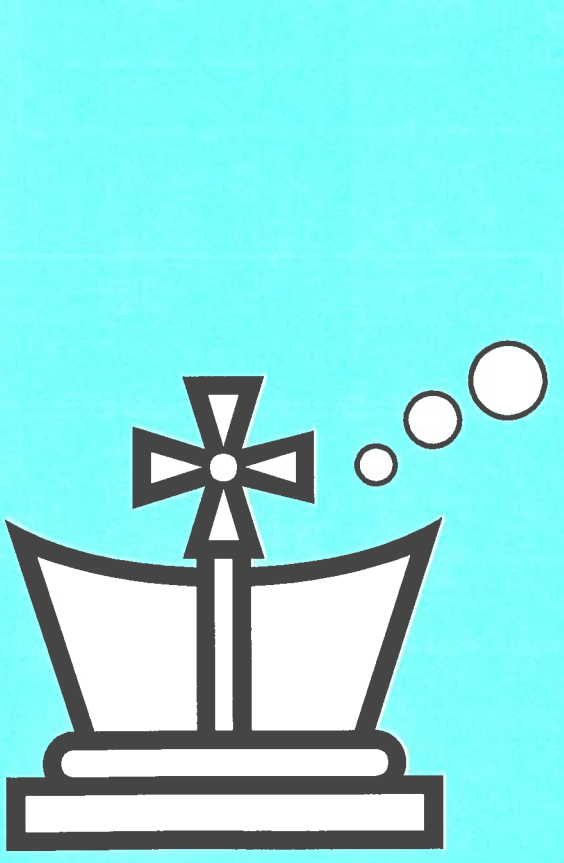


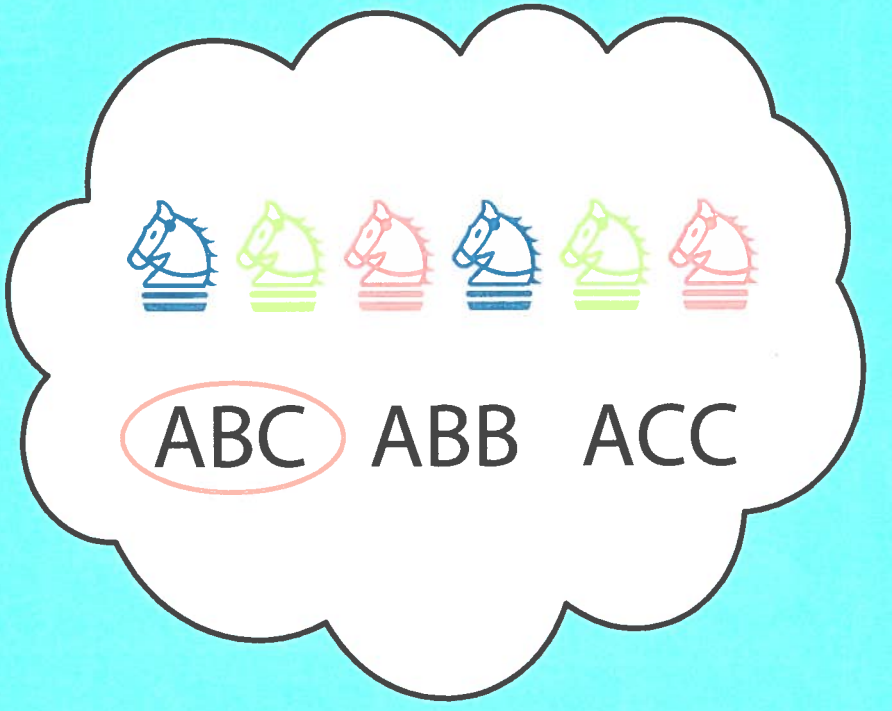
nally. I move one square
s. I live in the castle with



CHAPTER 11

PATTERNS

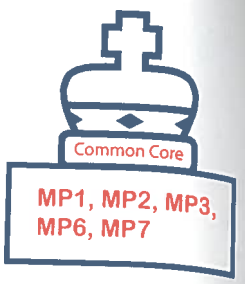


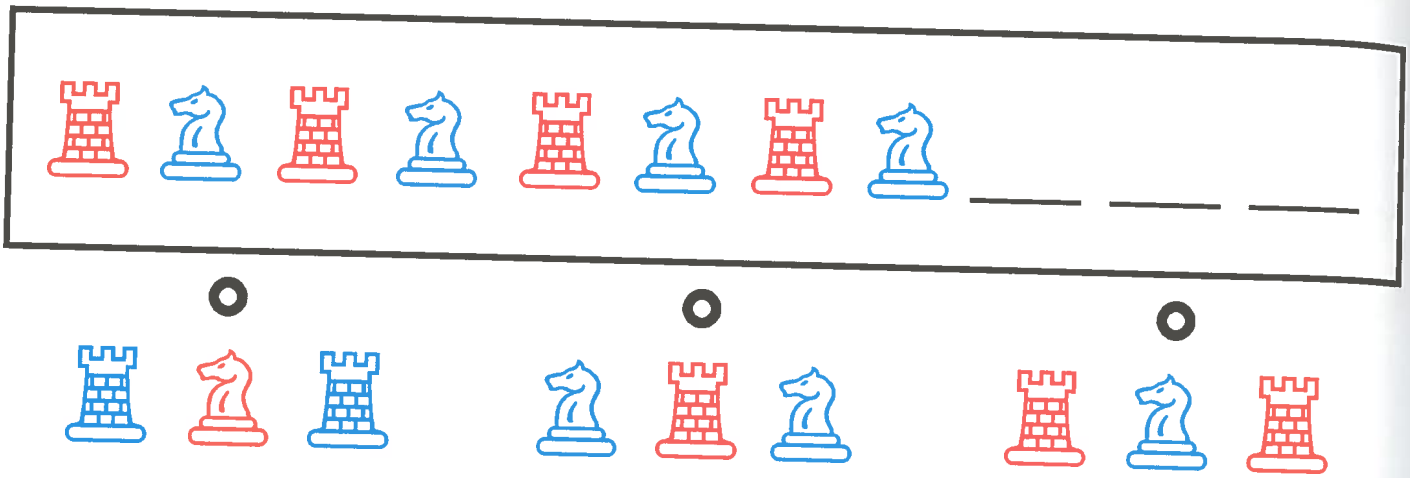


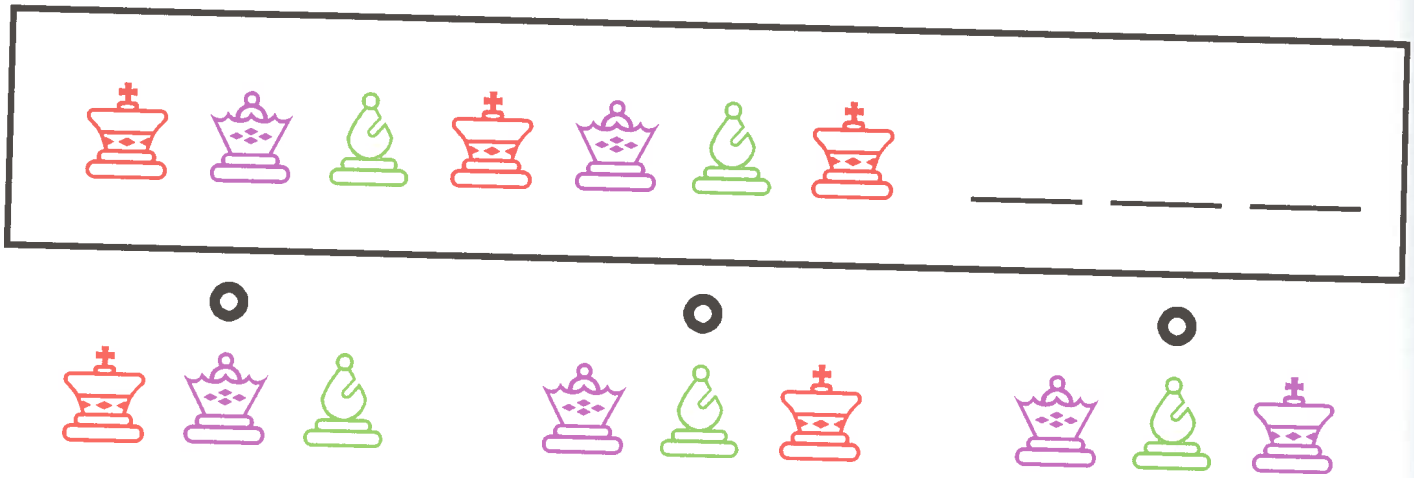
Name _____

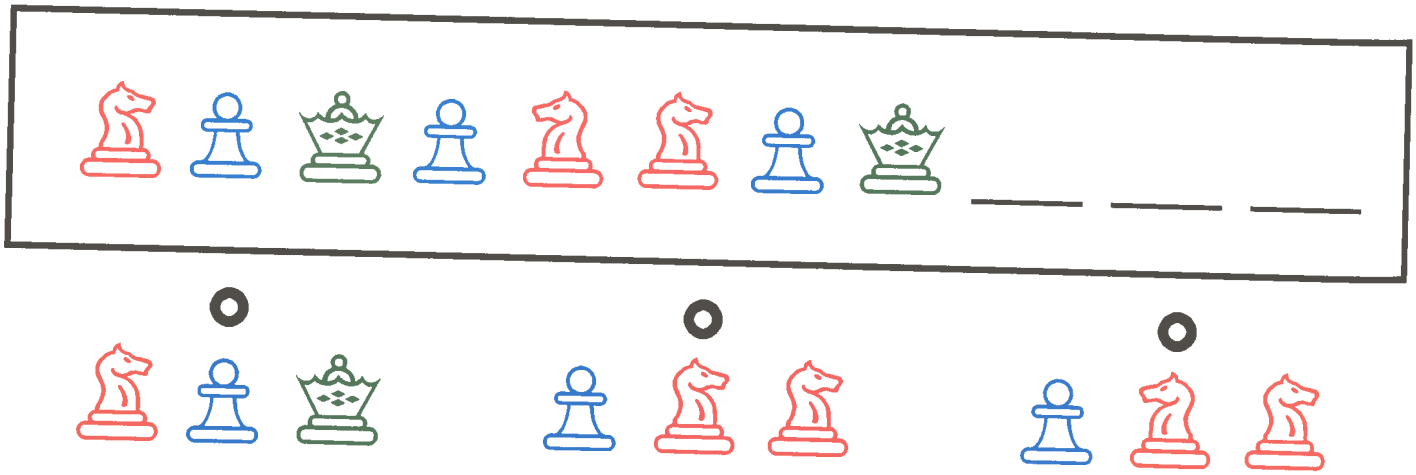
Lesson 7.1 Which Follows?

Circle the one that continues the pattern.







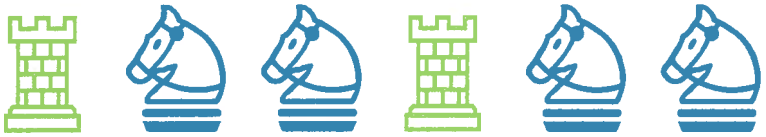


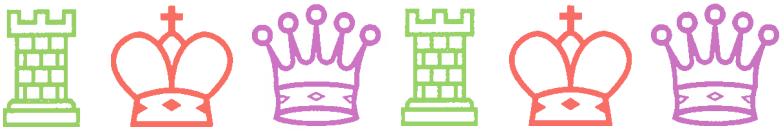
Name_____

Writing Patterns

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

ABC





Name_____

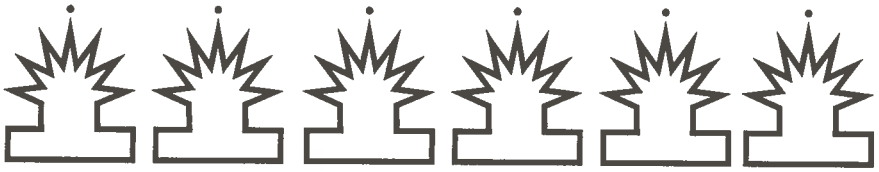
Coloring Patterns

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

ABC

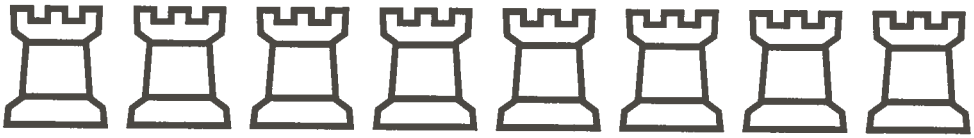
AAB

ABB



AB

AABB



ABBB

attern for each row.

ABC

AAB

ABB

AB

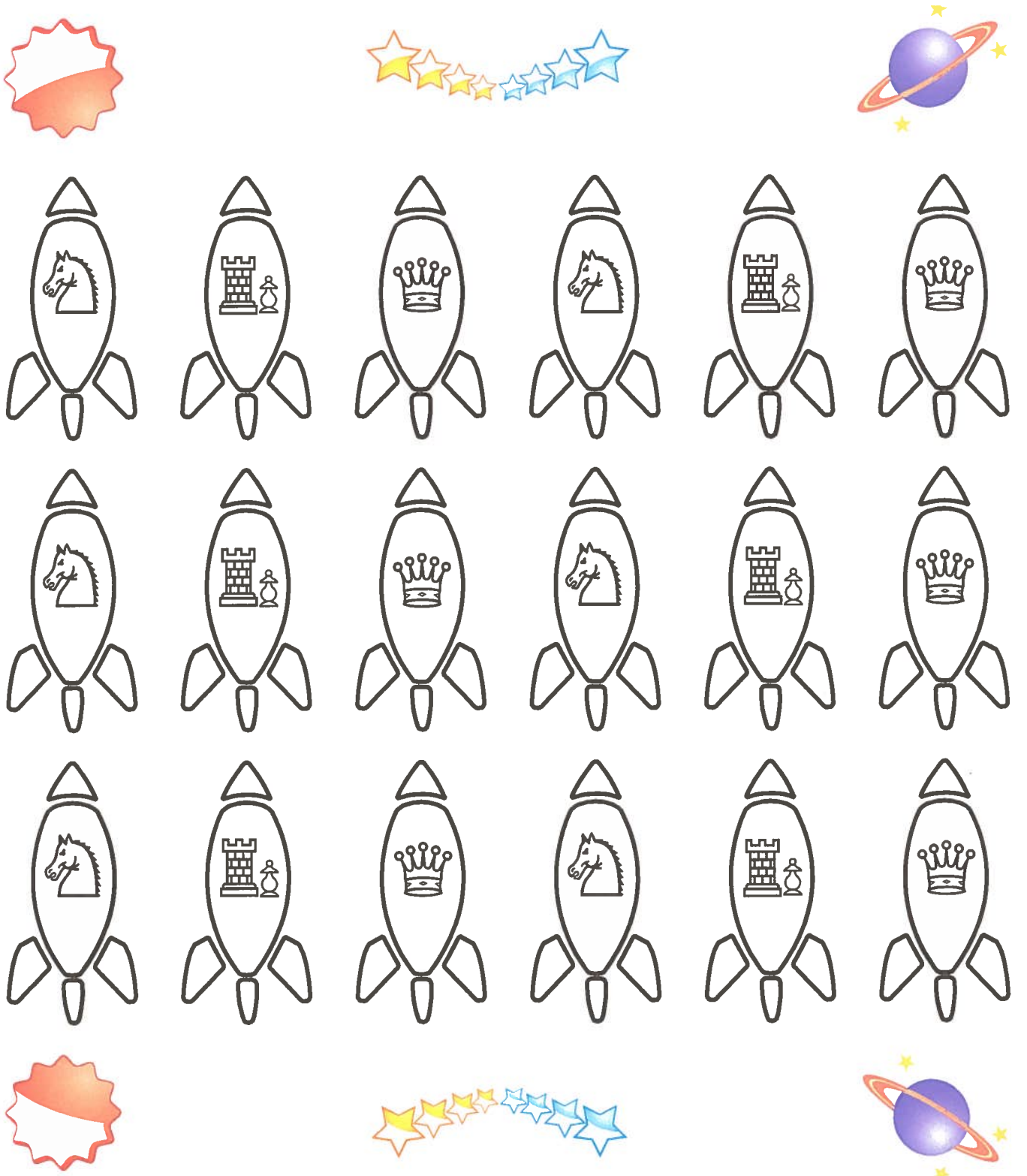
AABB

ABBB

Name_____

Lesson 7.2 Spaceships Pattern

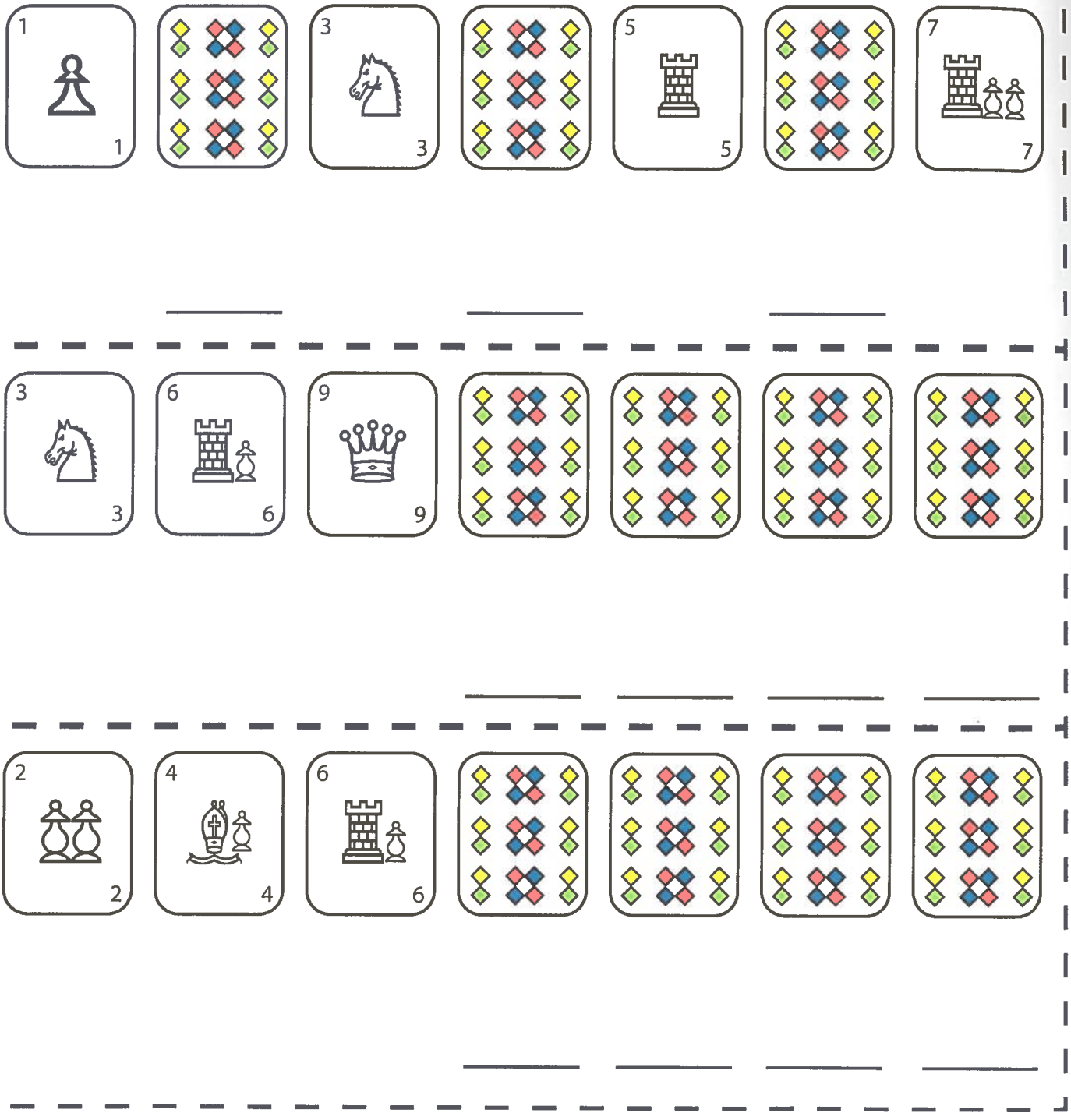
Take a look to all of the spaceships. The pieces represent the number of passengers in each spaceship. Color the one that has three passengers red. Color the one that has six passengers green. Color the one with nine passengers blue. Describe the patterns.



Name_____

Chess Cards Pattern

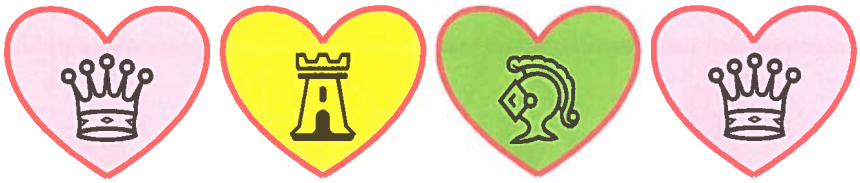
Find the number pattern in each row, and write the number that is supposed to be in each hidden card.

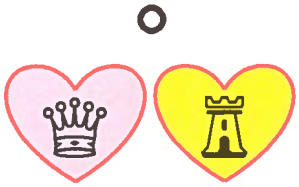


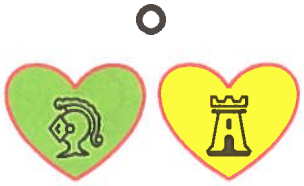
Name_____

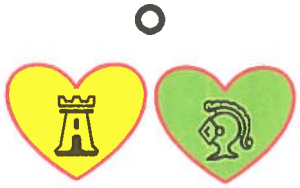
Lesson 7.3 Which Follows?

Circle the one that continues the pattern.



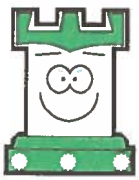




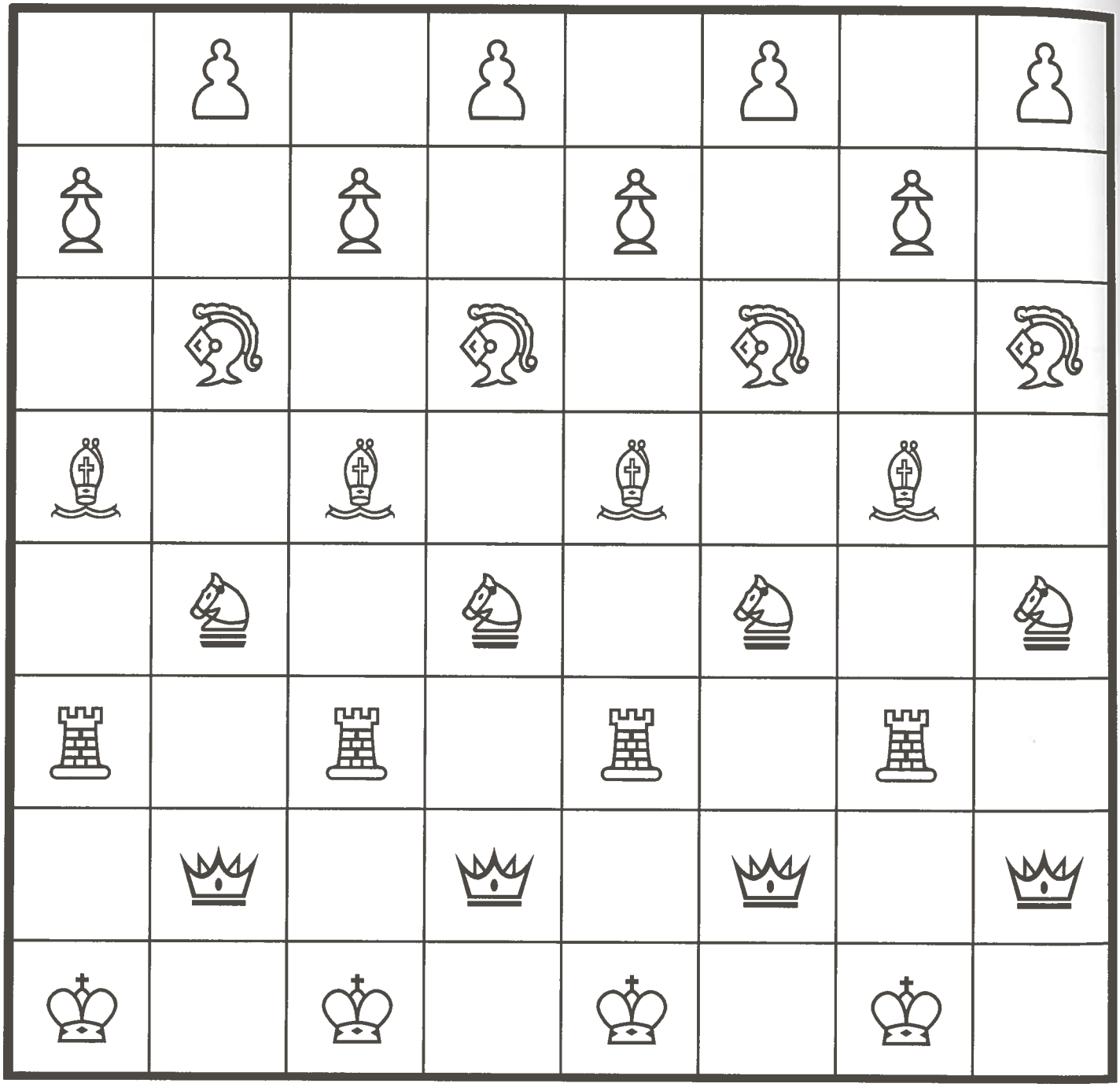


Name_____

Coloring Patterns



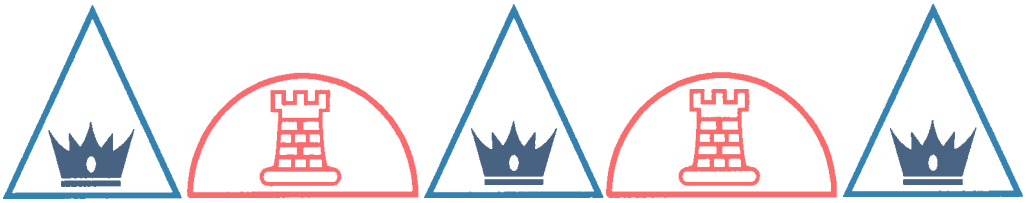
Color each set of pieces, and make your own pattern. Explain the pattern made.

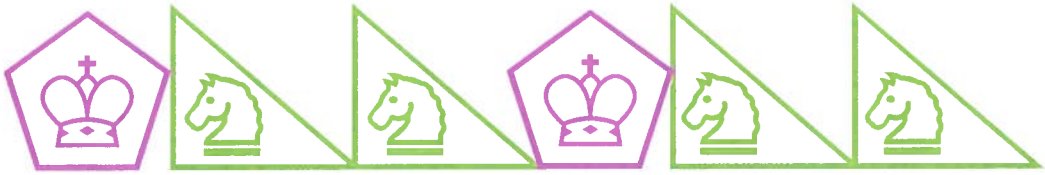


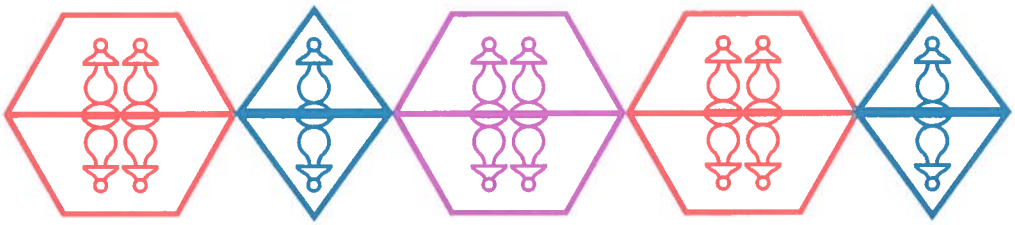
Name_____

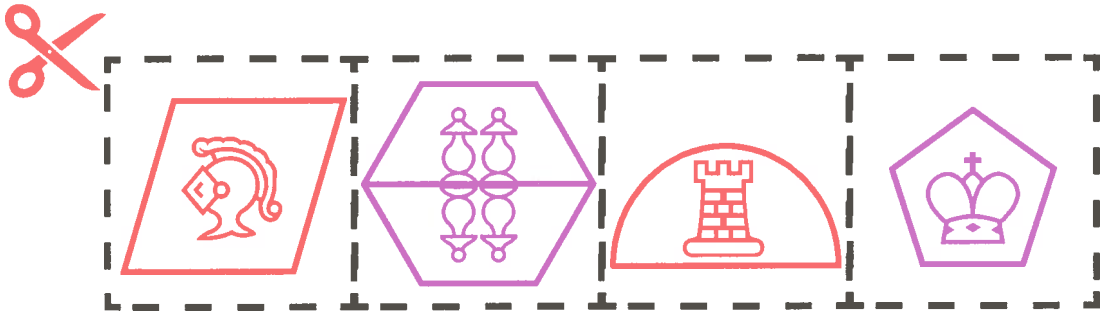
Shapes Pattern

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









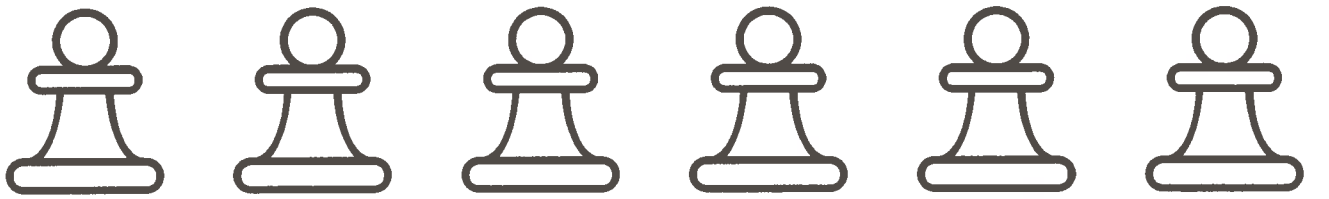
This page is blank for the cutting activity on the opposite side.

Name_____

Lesson 7.4 Color Pieces Pattern I

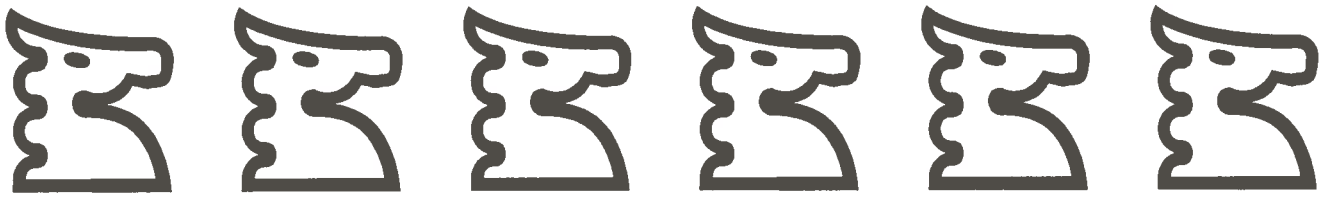
Color the pieces according to the instructions for each row and follow the pattern.

1.



Blue Green

2.

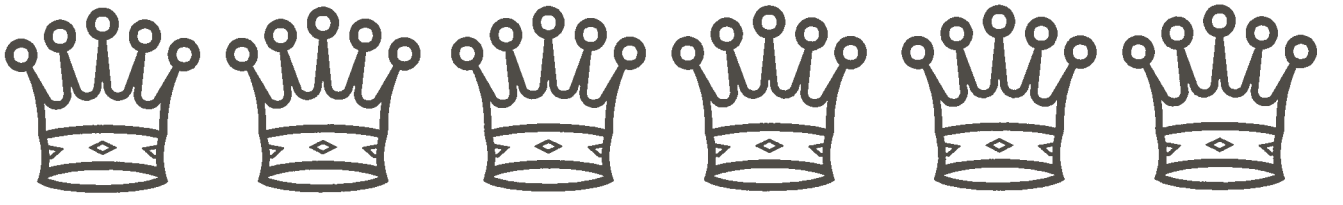


Purple Yellow

3.

Red Blue

4.

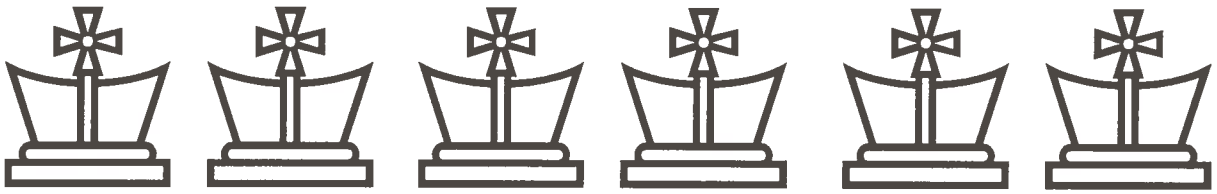


Green Pink

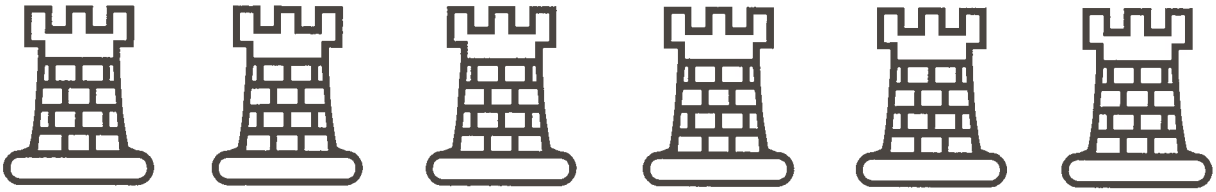
Name_____

Color Pieces Pattern II

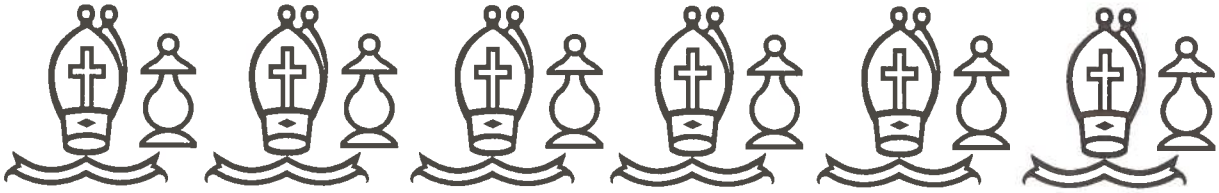
Color the pieces according to the instructions for each row and follow the pattern.

1. 

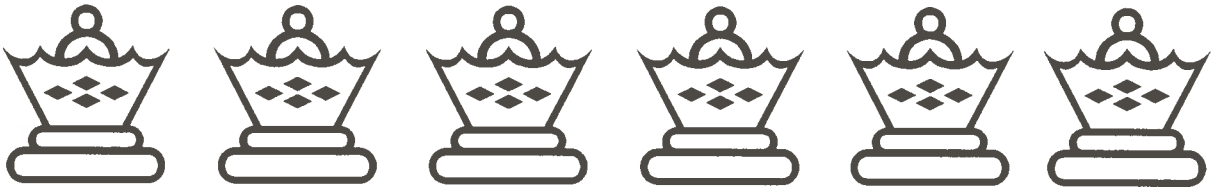
Purple Green

2. 

Blue Yellow

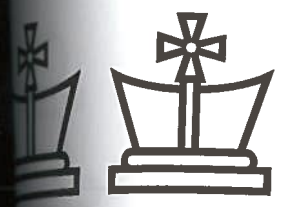
3. 

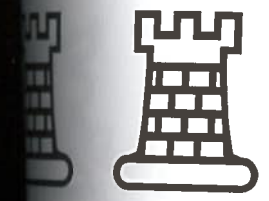
Red Blue

4. 

Green Orange

ow the pattern.



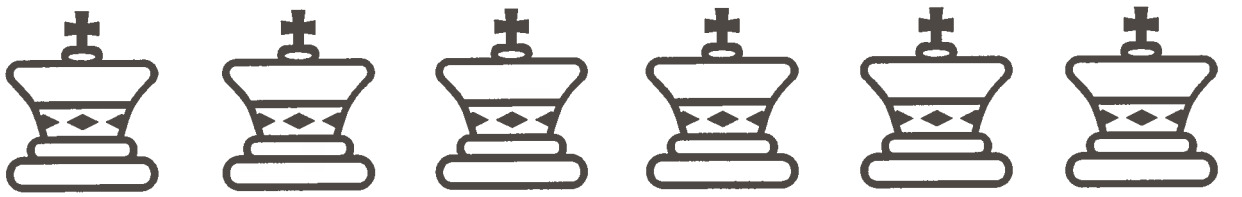


Name_____

Lesson 7.5 Color Pieces Pattern III

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

1.

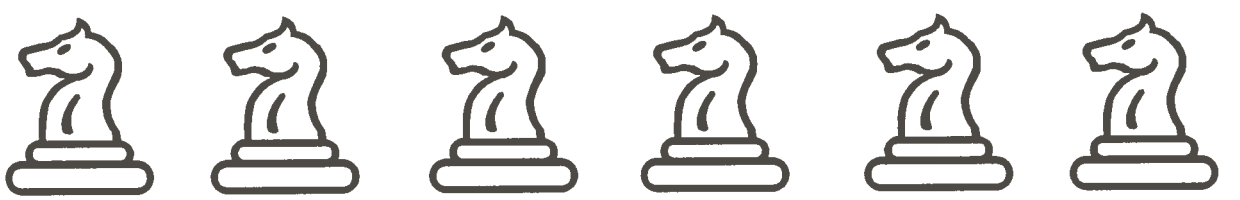


Yellow Green

2.

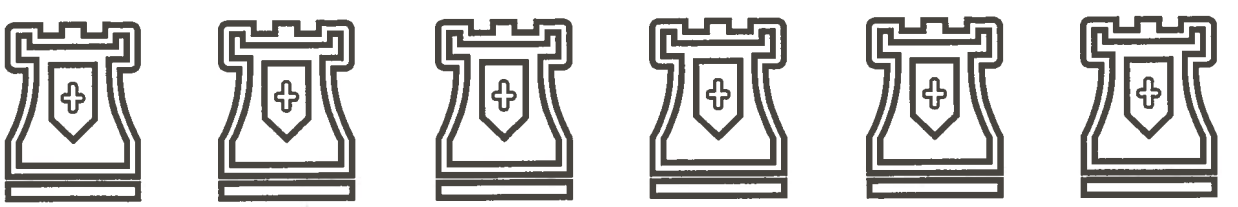
Blue Pink

3.



Red Green

4.

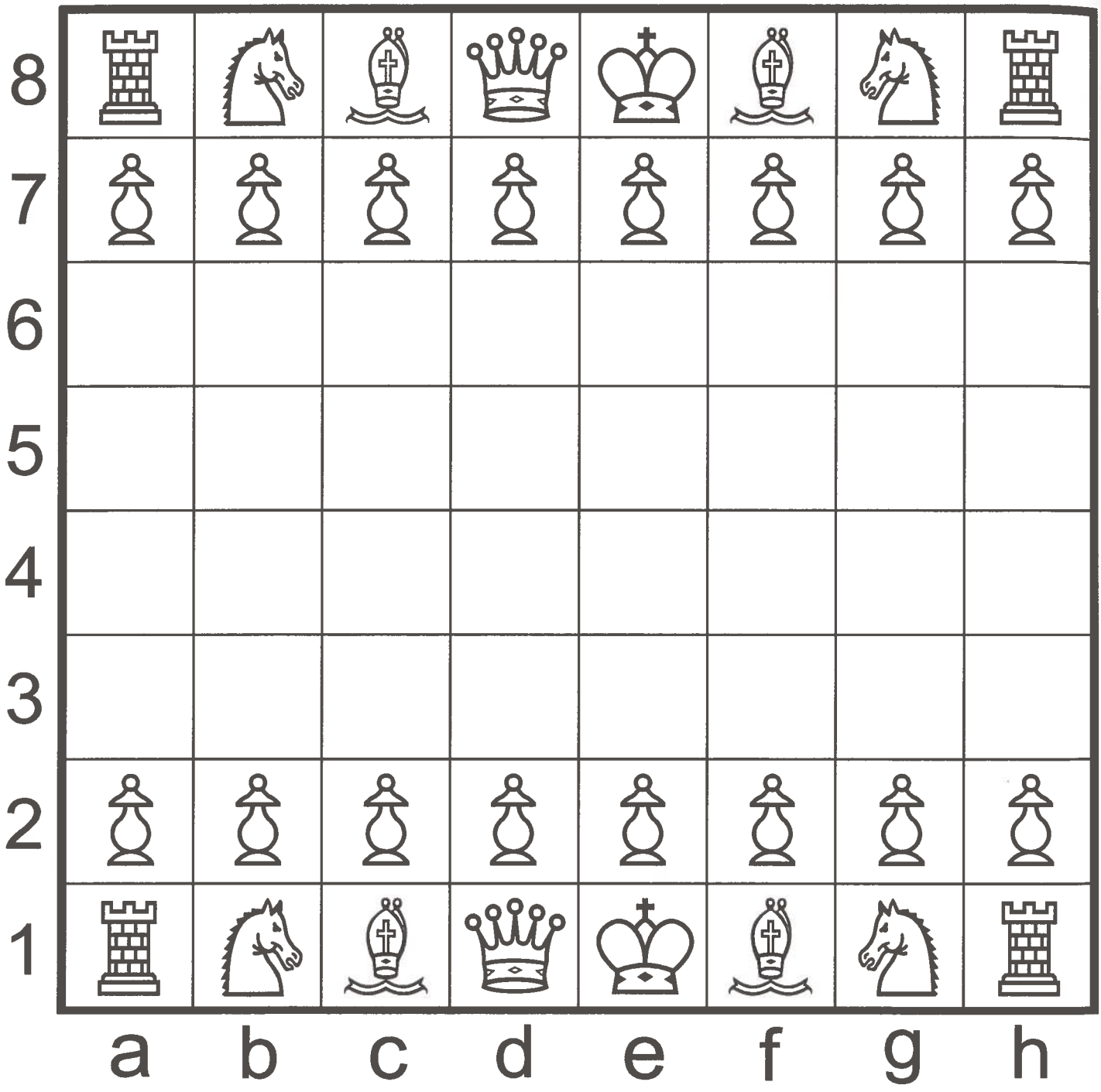


Purple Yellow

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

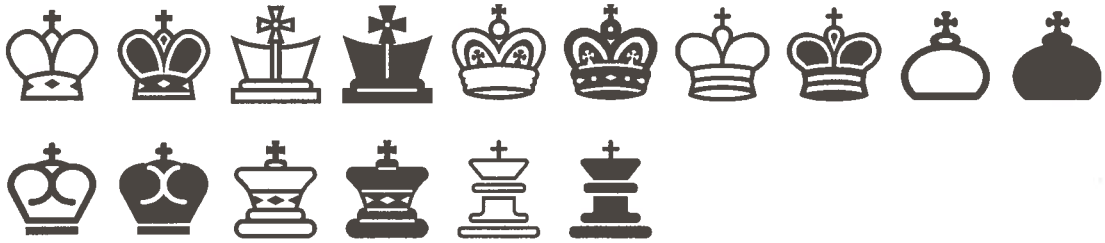
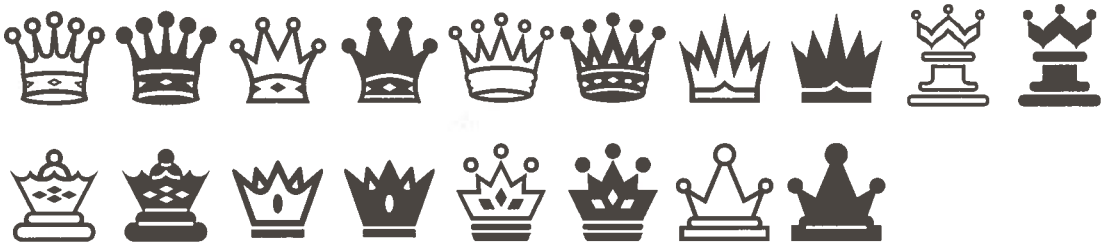
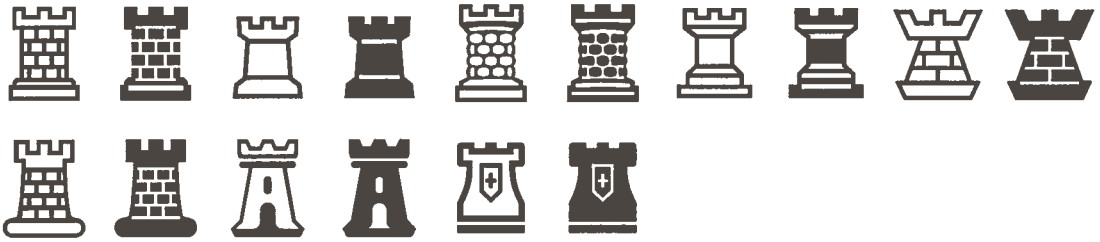
_____ _____

Date Teacher's Signature

See you in 1st grade!

GLOSSARY

The chess pieces symbols

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

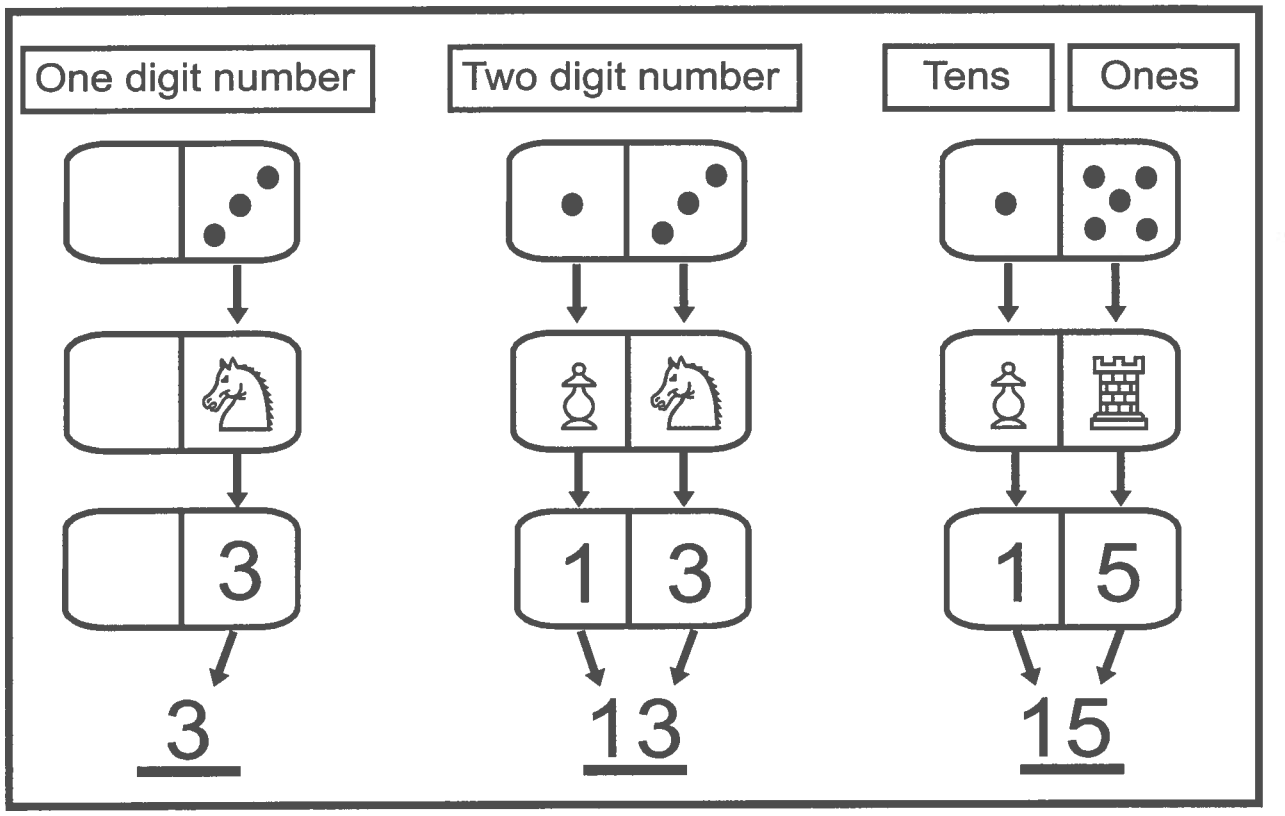
Chess Number Line

0	1	2	3	4	5	6	7	8	9
									

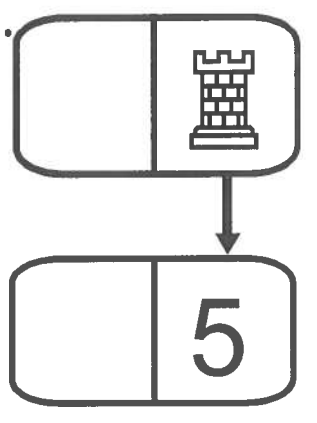
Mathematical Chess Table

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

The Chess Domino



1.



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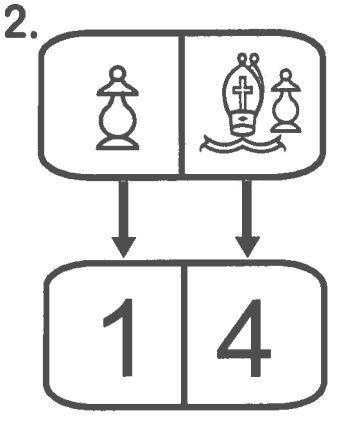
2.



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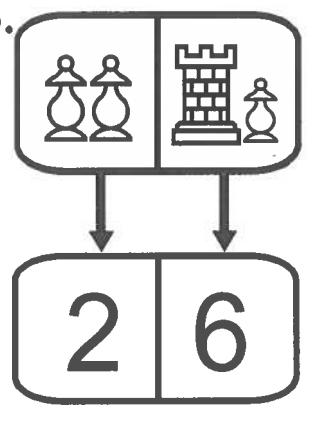
3.



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