

Name _____

Two-Dimensional Figures and Patterns

Comparing and Sorting

You need

- 10 coins, buttons, or shapes

Sort the objects into two groups.

STEP 1 Showing the Groups

Draw or trace the objects to show how you sorted. Write a name for each group.



STEP 2 Sorting Another Way

Sort the objects another way. Tell about it.

Investigation





School-Home Connection

Dear Family,

Today we started Chapter 1 of *Think Math!* In this chapter I will learn about two-dimensional figures and how they are similar and how they are different. I will also learn about patterns and ways to recognize and make patterns with objects, figures, and numbers. There are NOTES on some of my pages to explain what I am learning every day.

Here are some activities for us to do together at home. These activities will help me understand two-dimensional figures and patterns.

Love,

Family Fun

Shape Dominoes

Play this game with your child to provide practice drawing and recognizing two-dimensional figures. Your child will play a similar game in school.

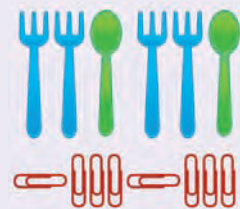
- You will need a red crayon, a blue crayon, and a yellow crayon.
- On a sheet of paper, draw a small or large triangle, circle, square or rectangle using one of the crayons.
- Have your child draw a figure next to yours that is different in only one way—size, shape, or color.
- Switch roles and repeat. Play until you have created a long chain of figures. Have your child tell how the figures differ each time.



Household Patterns

Work with your child to create patterns with common household objects.

- Use common household objects such as forks and spoons, napkins, coins, or paper clips to create patterns.
- Arrange the objects in a row to create a repeating pattern by alternating the object in a certain way, or by placing similar objects in different positions.
- Repeat the activity with different objects. Encourage your child to describe each pattern.



Introducing Think Math!

NCTM Standards 1, 6, 7, 8, 9, 10

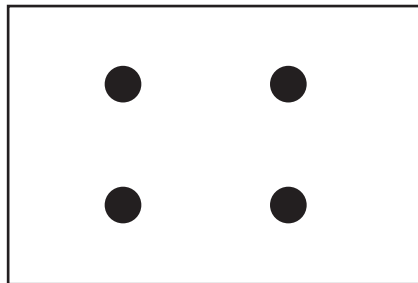
1. Write the number or draw the picture.

zero	one	two	three	four	five
0	1	2	3	4	5
4	0	1	2	4	5
4	4	0	1	2	3

2. Draw each set.



1 fewer



1 more



NOTE: Your child is learning to write numbers to match sets of objects. Together, find patterns within the rows and columns on this page.



III three

3

6	7	8	9	10

3. Match.

7		
9		
8		
10		

Problem Solving

4. What is missing?

2	4			10	

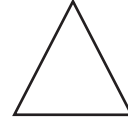
4 four IV

Examining Two-Dimensional Figures

NCTM Standards 3, 6, 7, 8, 9, 10

I. Match.

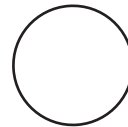
rectangle



triangle



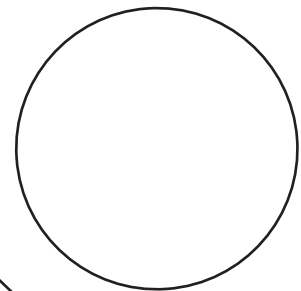
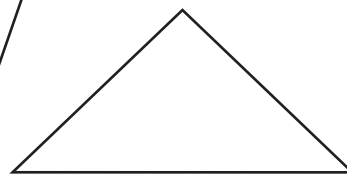
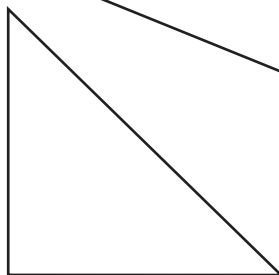
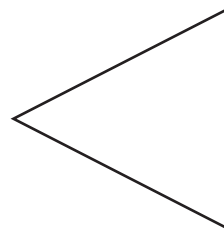
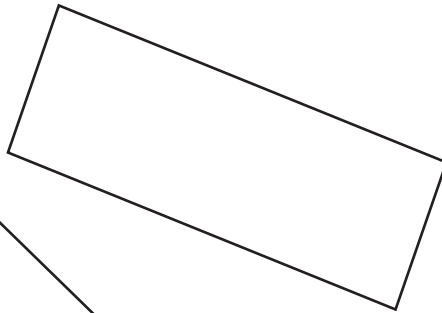
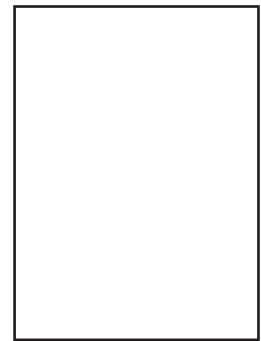
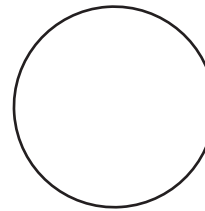
circle



2. Color  blue.

Color  green.

Color  red.



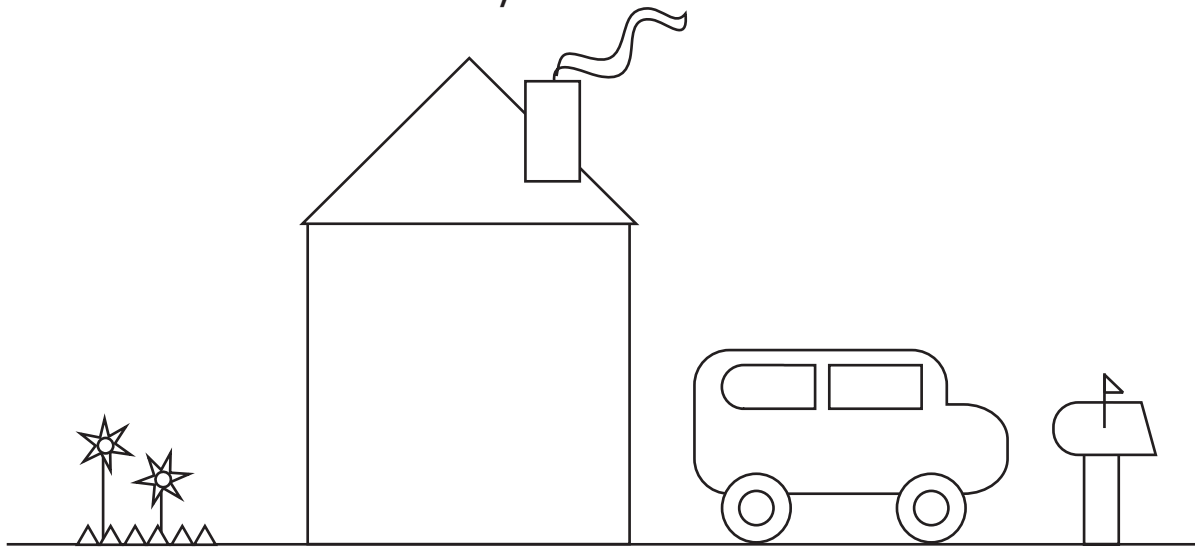
NOTE: Your child is learning to identify and describe two-dimensional figures. Ask your child to name the figures on this page.



V five

5

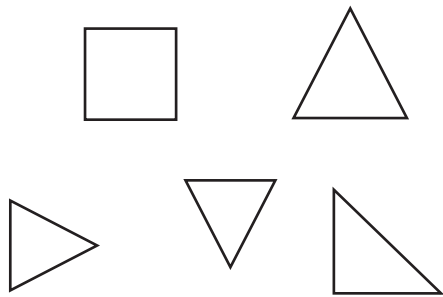
3. Color . Write how many.



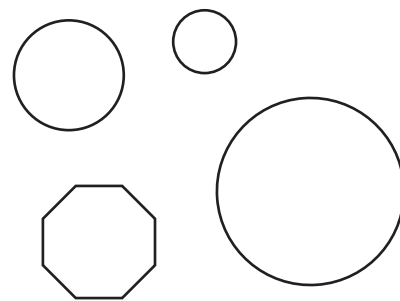
There are _____ rectangles.

Which figure does not belong? Cross it out.

4.

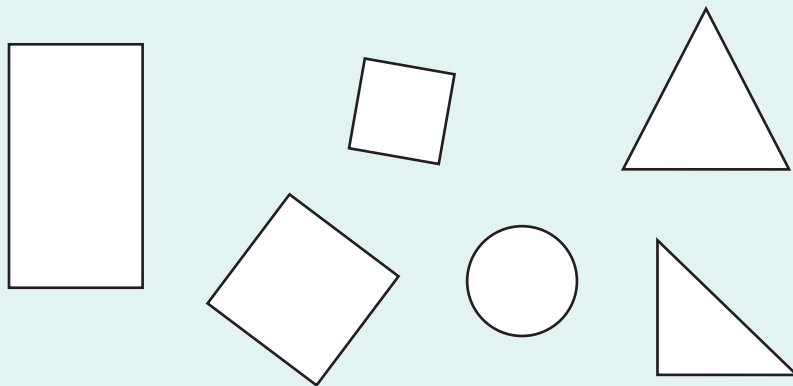


5.



Challenge

6. Which figure does not belong?
Draw a figure that does belong.

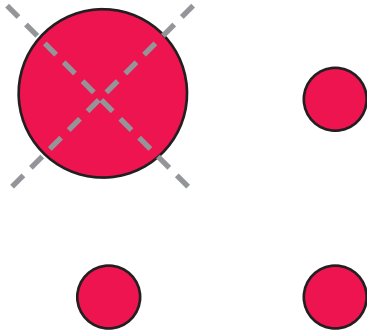


Sorting by Attributes

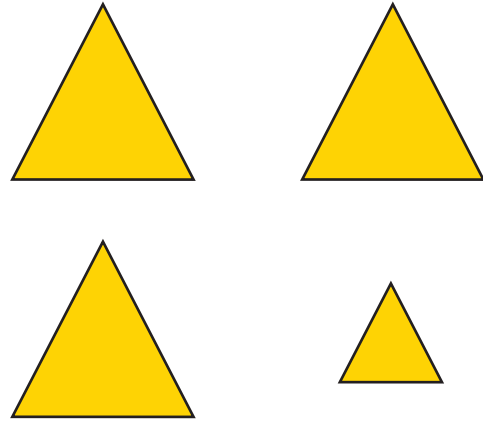
NCTM Standards 3, 5, 6, 7, 8, 9, 10

Which does not belong? Cross it out.

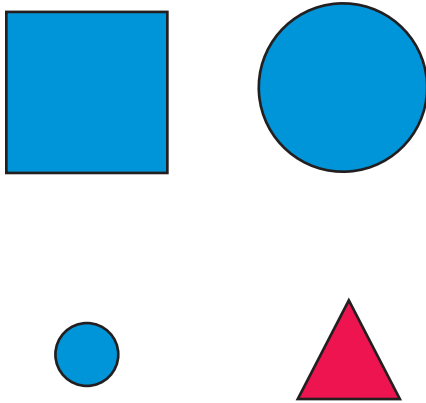
1.



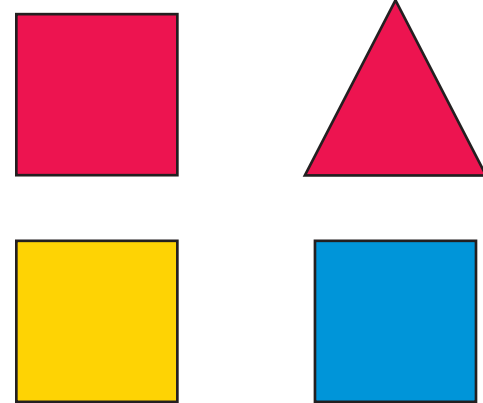
2.



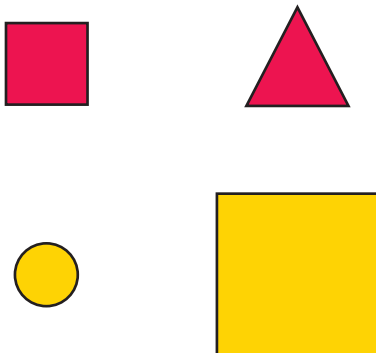
3.



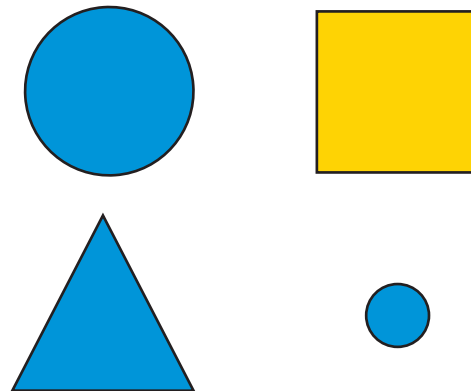
4.



5.



6.

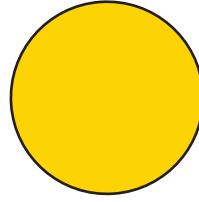
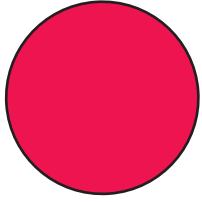


NOTE: Your child is learning to sort objects by color, shape, and size. If you like, ask your child to describe how two figures on this page are similar and how they are different.

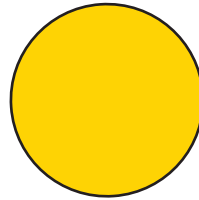
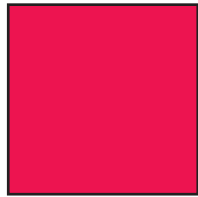
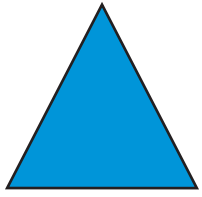


Draw another figure that belongs.
Explain why.

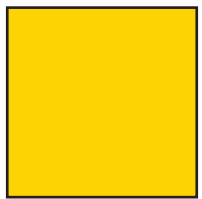
7.



8.



9.





Challenge

10. The figure with the X does not belong. Why?



8



eight

VIII




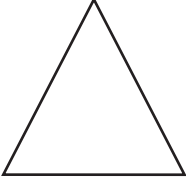



Sorting by More Than One Attribute

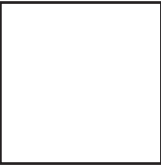
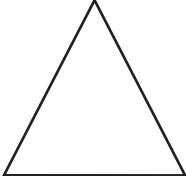

NCTM Standards 3, 6, 8, 9, 10

What is missing?

1.

2.

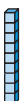
		
		



NOTE: Your child is learning to identify similarities and differences. Have your child tell how the figures on this page are the same and how they are different.



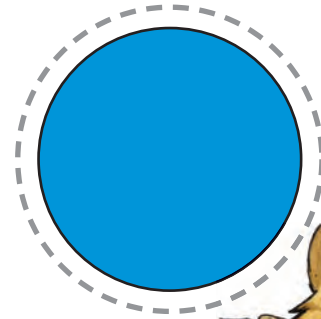
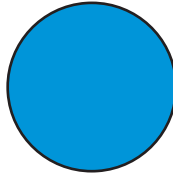
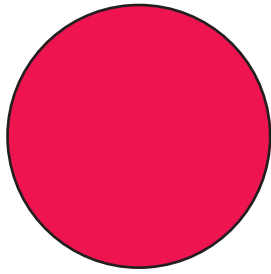
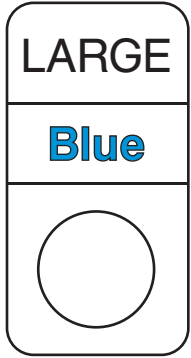
IX nine



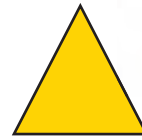
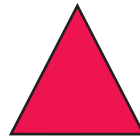
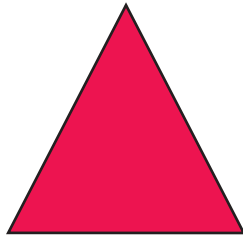
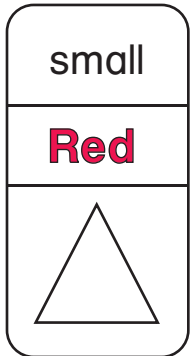
9

Which figure is it?

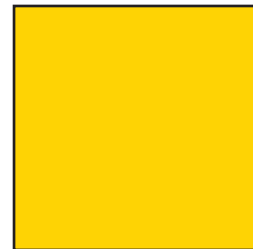
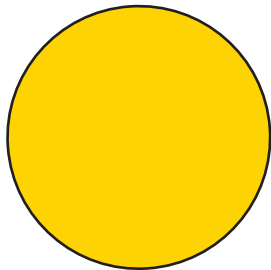
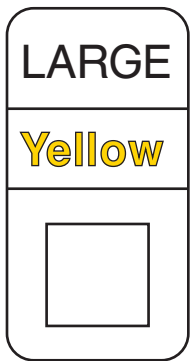
3.



4.

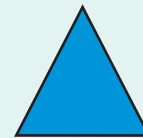
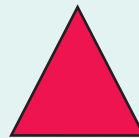
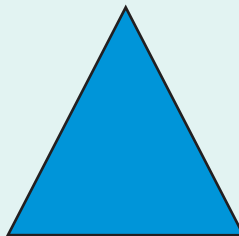
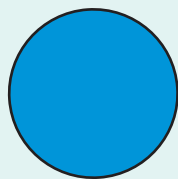
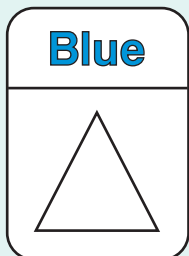


5.



Challenge

6.

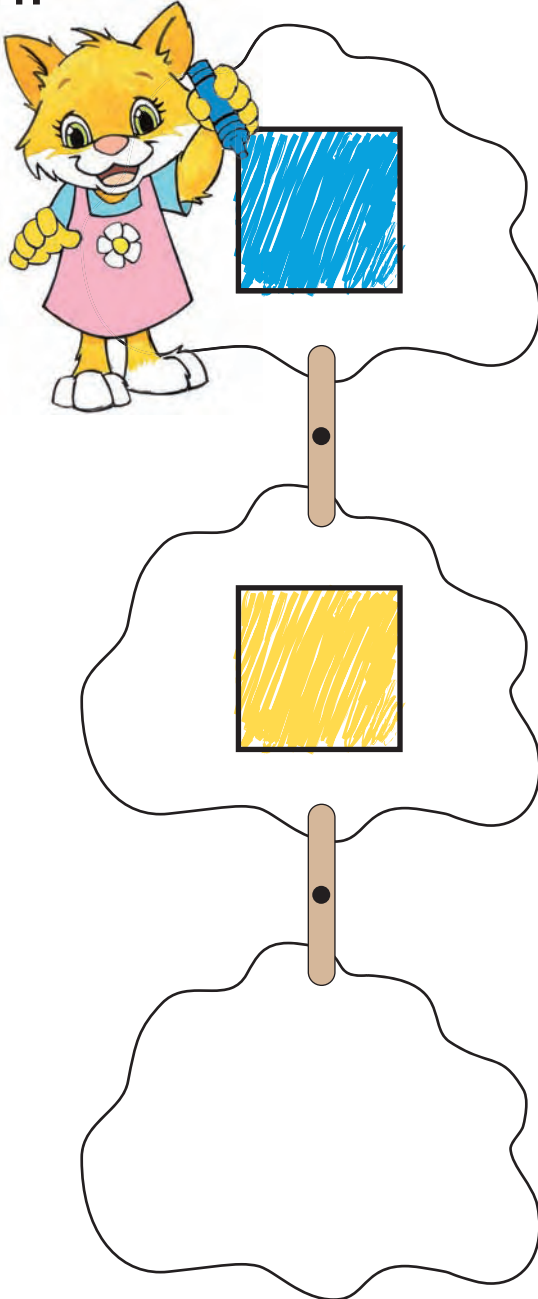


Counting Differences

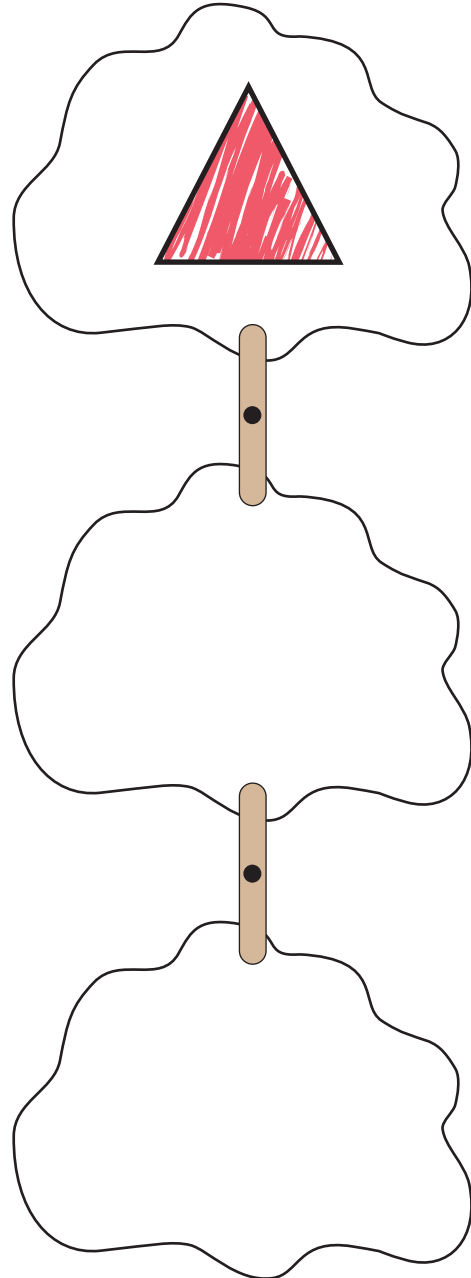
NCTM Standards 1, 3, 6, 7, 9, 10

Draw figures that are different in one way each time.

1.



2.

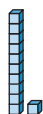


NOTE: Your child is learning to count the number of ways things can be different. These figures can differ in shape, size, and color.

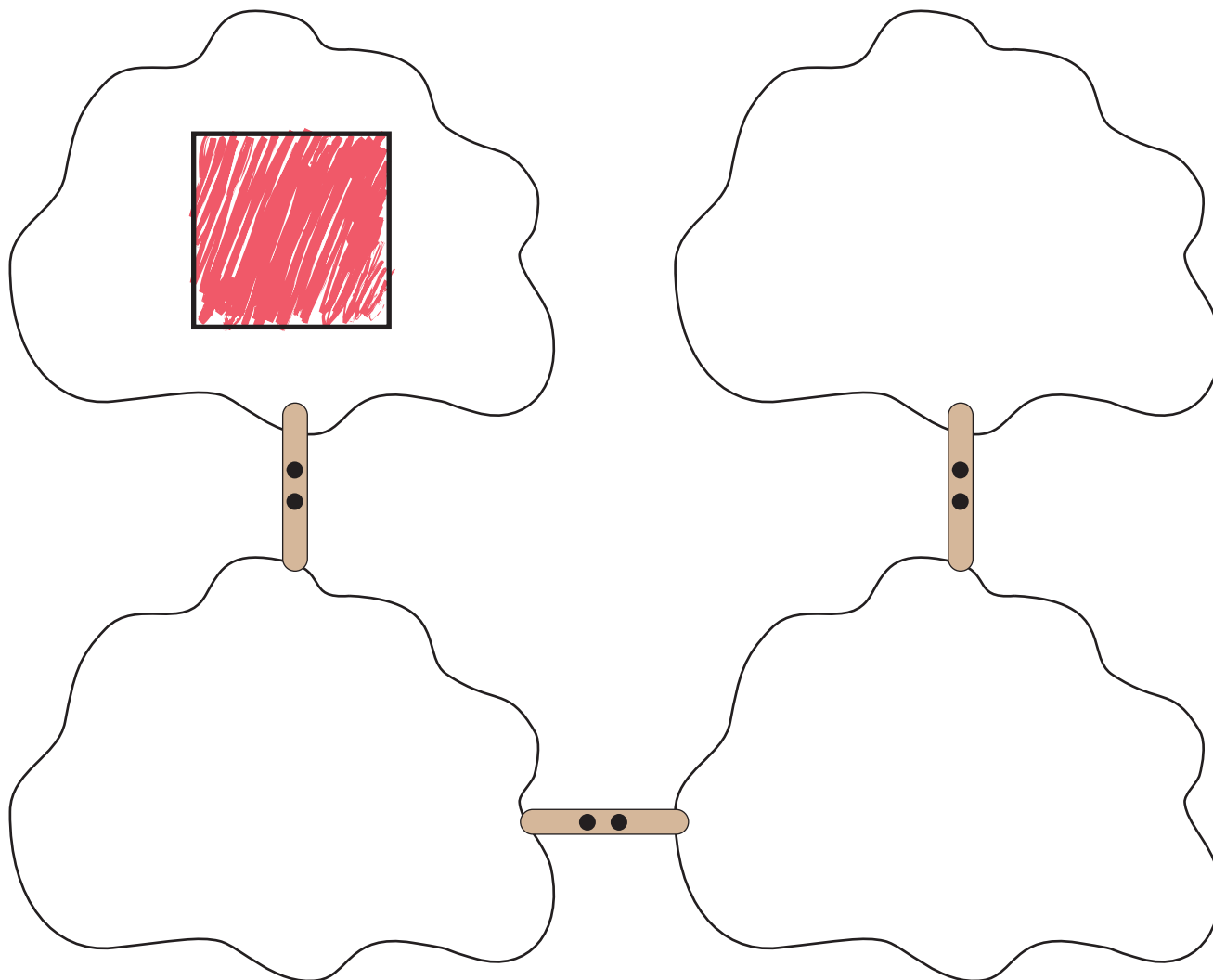


XI

eleven

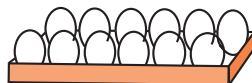
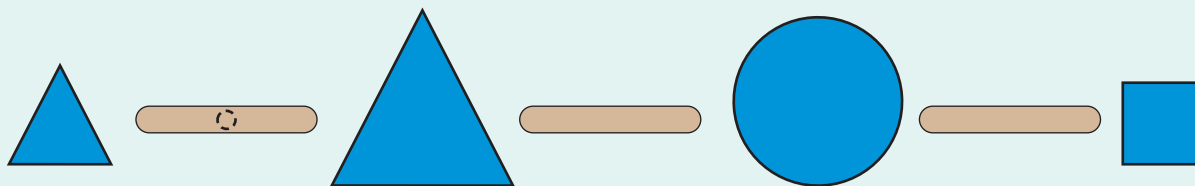


3. Draw figures that are different in two ways.



Challenge

4. In how many ways are the figures different?
Draw the dots.

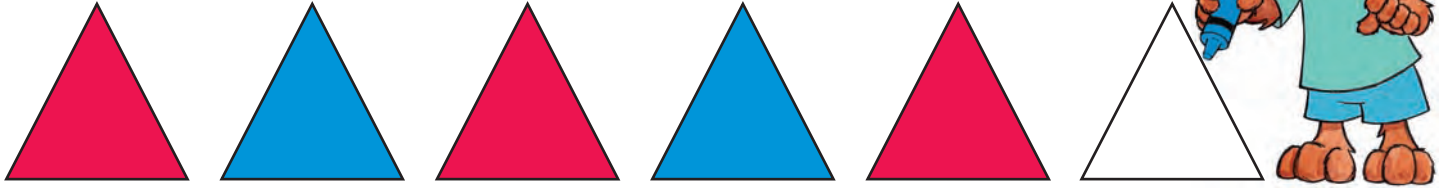


Repeating and Growing Patterns

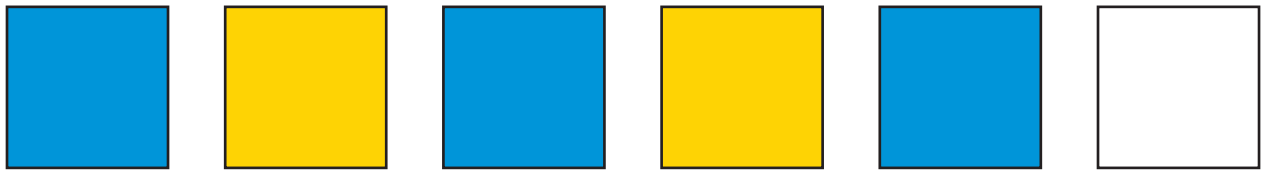
NCTM Standards 2, 3, 6, 7, 8, 10

What color is missing?

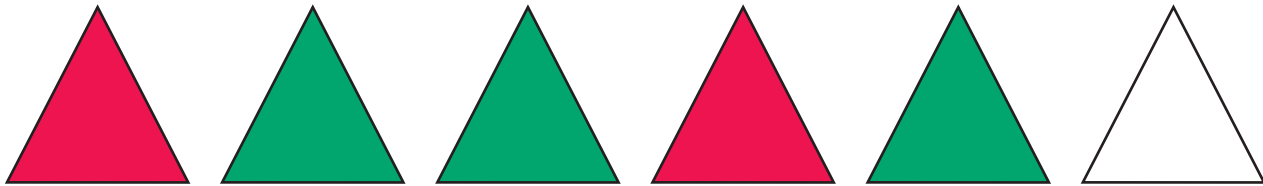
1.



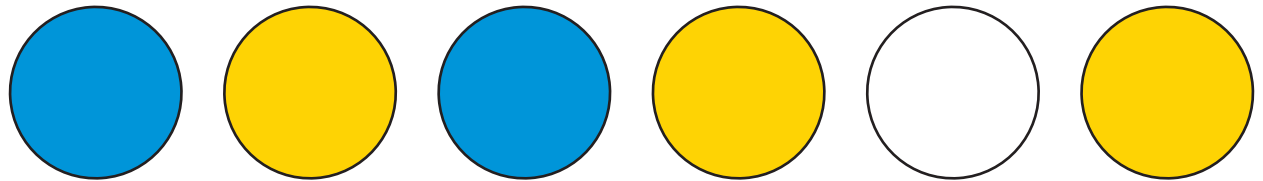
2.



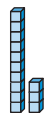
3.



4.

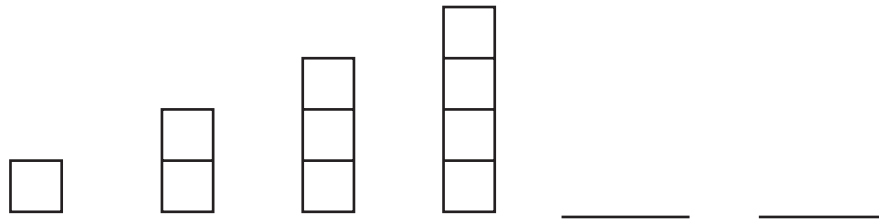


NOTE: Your child is learning to identify, extend, and create repeating and growing patterns. Have your child describe the patterns on this page.

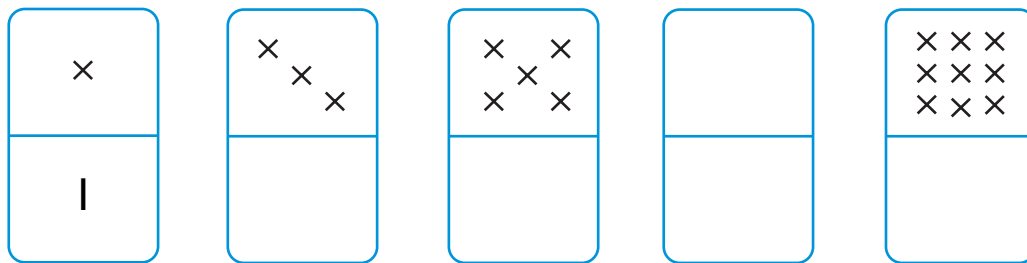


Continue the pattern.

5.



6.



7. Make your own pattern.

Problem Solving

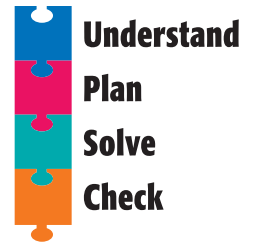
8. Draw a shape pattern to match this letter pattern.

A B A B A B

Problem Solving Strategy

Look for a Pattern

NCTM Standards 1, 2, 6, 7, 8, 9, 10



1. Jane lives on this street.
What is the number of Jane's house?
Explain.



2. Tom lives on this street.
What is the number of Tom's house?
Explain.



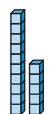


NOTE: Your child is learning different ways to solve problems. Sometimes looking for a pattern is an efficient way to solve a problem.



XV

fifteen



15

Problem Solving Test Prep

1. What numbers are missing?

1 2 3 ___ 5 6 ___ 8

(A) 2 and 9

(B) 4 and 7

(C) 5 and 6

(D) 4 and 5

2. You have 5 balloons.
Some fly away.
How many could you
have now?

(A) 1 balloon

(B) 5 balloons

(C) 6 balloons

(D) 10 balloons



Show What You Know

3. Bob has 3 apples.
Juan has 1 more apple.
How many apples does
Juan have?

_____ apples

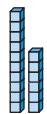
Explain.

4. What comes next?



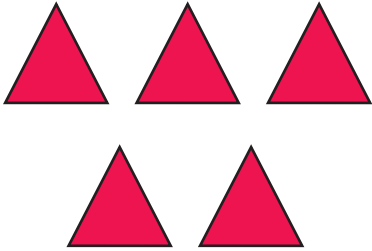
_____ dot

Explain how you know.

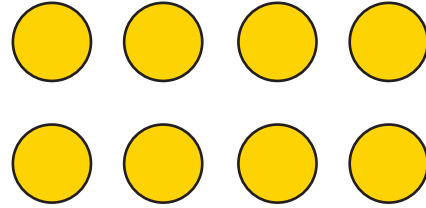


Write how many. Lesson 1

1.

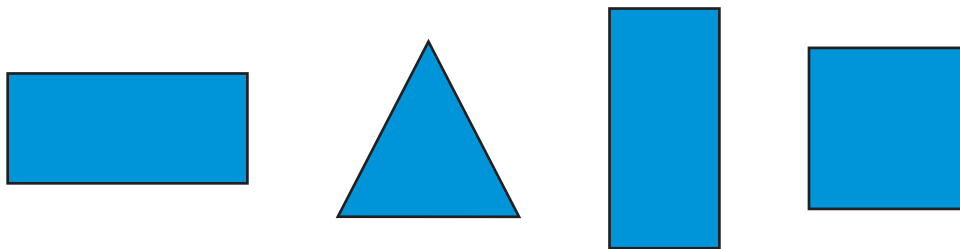


2.

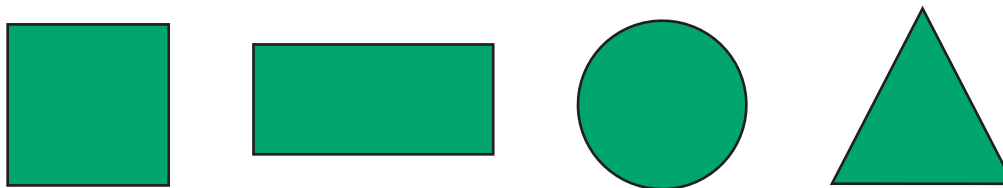


Cross out the figure that does not belong. Lessons 2 and 3

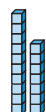
3.



4.



5.

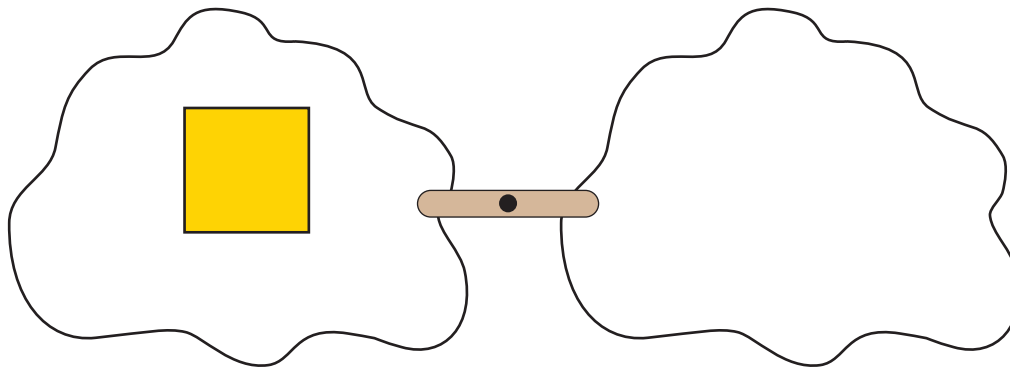


Draw each figure. Lesson 4

6. large red square

7. small blue circle

8. Draw a figure that is different in one way. Lesson 5



Problem Solving Lessons 6 and 7

What comes next?

