

Identify and Partition Shapes

- Have you ever seen a stained glass window?
- What shapes do you see in the window?

Chapter Learning Target:

Understand shapes.

Chapter Success Criteria:

- I can name shapes.
- I can explain information about shapes.
- I can compare one shape to another.
- I can draw different shapes.



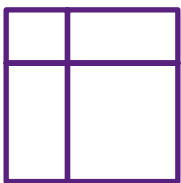
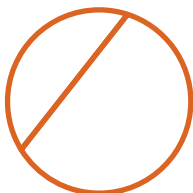
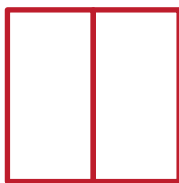
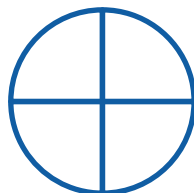
Vocabulary

Review Words

equal shares
unequal shares

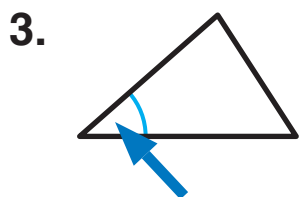
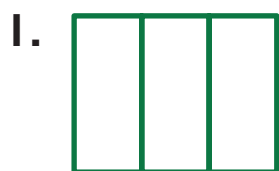
Organize It

Use the review words to complete the graphic organizer.

<div></div>	<div></div>
 	 

Define It

Use your vocabulary cards to identify the word.
Find the word in the word search.



N	R	P	E	L	B	I	Y
K	Y	G	Y	S	A	U	M
A	R	N	T	O	N	F	W
O	P	O	L	Y	G	O	N
X	A	I	H	S	L	A	T
L	V	G	E	P	E	Q	H
S	U	D	A	T	O	E	N
T	H	I	R	D	S	J	X

Chapter 15 Vocabulary Cards

angle

cube

edge

face

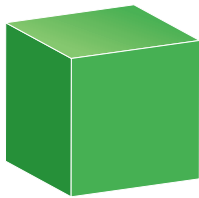
fourths

halves

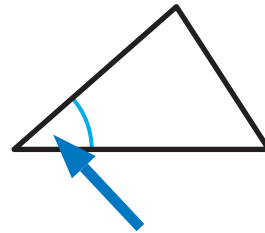
hexagon

octagon

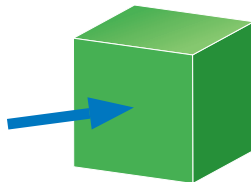
© Big Ideas Learning, LLC



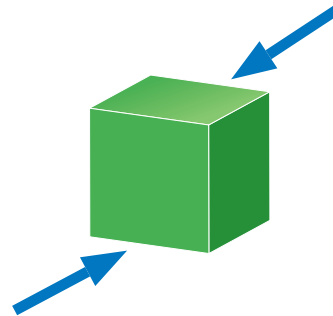
© Big Ideas Learning, LLC



© Big Ideas Learning, LLC

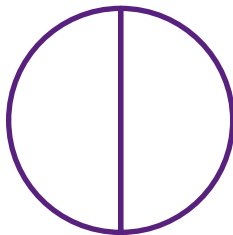


© Big Ideas Learning, LLC



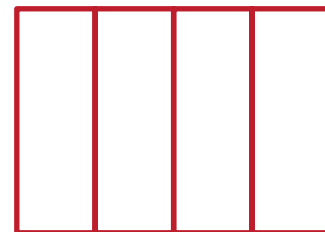
© Big Ideas Learning, LLC

The circle is divided into **halves**.



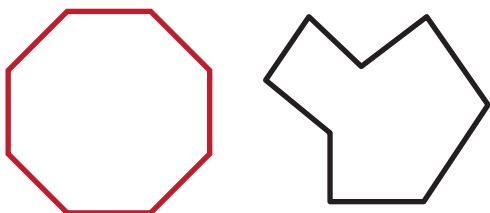
© Big Ideas Learning, LLC

The rectangle is divided into **fourths**.



© Big Ideas Learning, LLC

8 sides
8 vertices



© Big Ideas Learning, LLC

6 sides
6 vertices



Chapter 15 Vocabulary Cards

pentagon

polygon

quadrilateral

rhombus

right angle

side

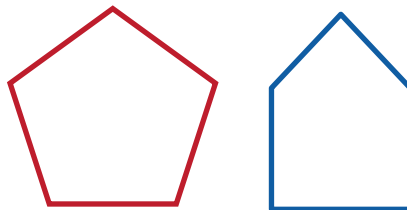
thirds

vertex

A **polygon** is a closed two-dimensional shape with 3 or more sides.



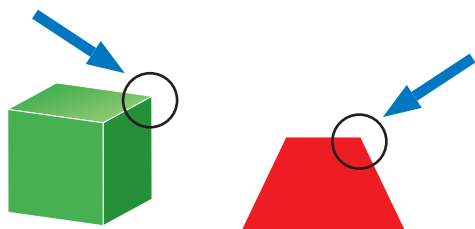
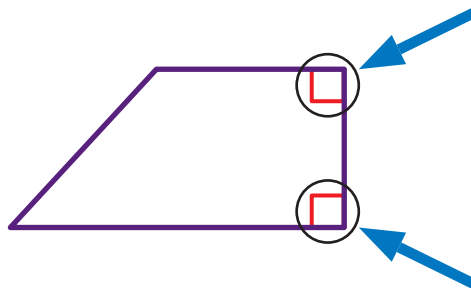
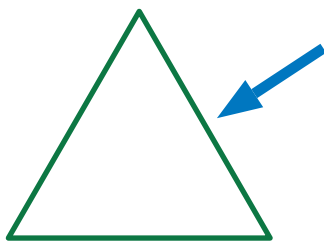
5 sides
5 vertices



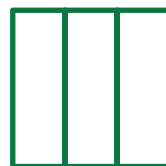
4 sides that are the same length



4 sides
4 vertices



The square is divided into **thirds**.

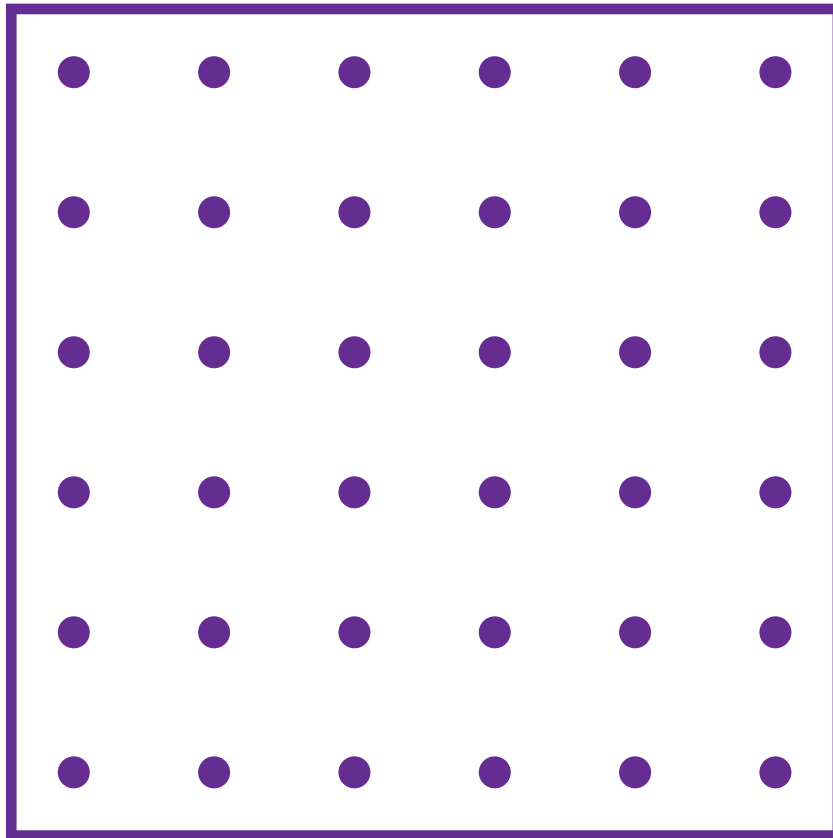


Learning Target: Identify and describe two-dimensional shapes.



Explore and Grow

Create a shape with 3 sides on your geoboard.
Draw your shape. Did everyone in your class make the same shape?



Circle the word that makes the sentence true.

_____ are shapes with 3 sides.

Circles

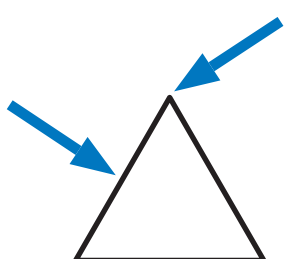
Squares

Triangles



Think and Grow

side



vertex



triangles

3 sides

3 vertices

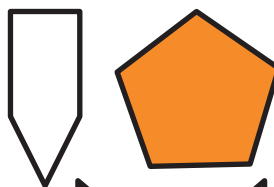


4 sides



4 vertices

quadrilaterals



5 sides

5 vertices

pentagons

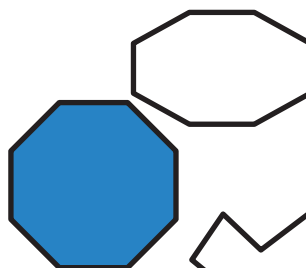


6 sides

6 vertices



hexagons



8 sides

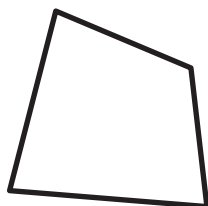
8 vertices

octagons



Show and Grow *I can do it!*

1.

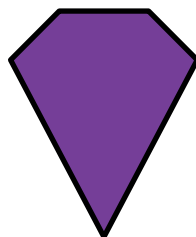


_____ sides

_____ vertices

Shape: _____

2.



_____ sides

_____ vertices

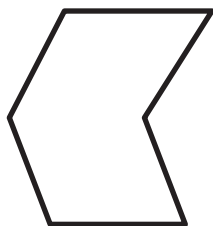
Shape: _____

Name _____



Apply and Grow: Practice

3.

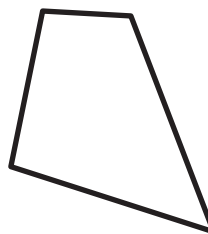


_____ sides

_____ vertices

Shape: _____

4.

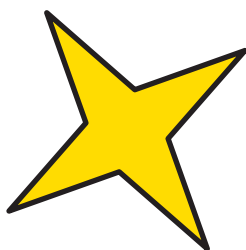


_____ sides

_____ vertices

Shape: _____

5.



_____ sides

_____ vertices

Shape: _____

6.

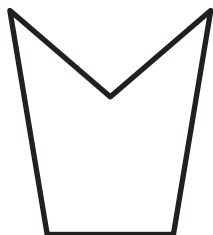


_____ sides

_____ vertices

Shape: _____

7.

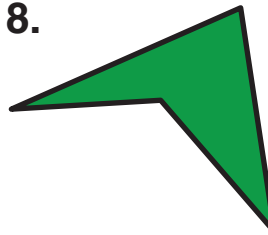


_____ sides

_____ vertices

Shape: _____

8.



_____ sides

_____ vertices

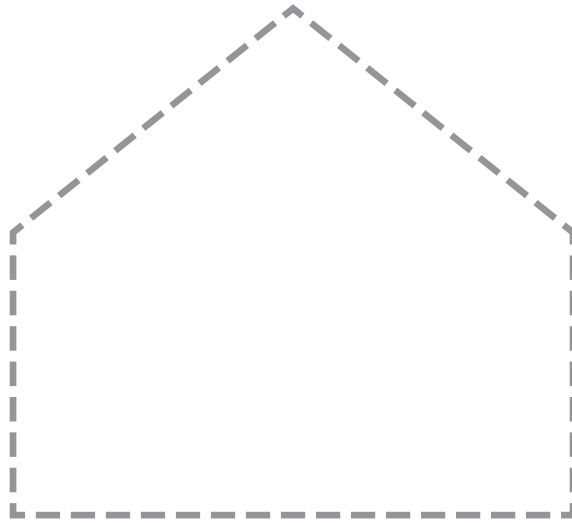
Shape: _____

9. **Writing** How are a pentagon and an octagon different?



Think and Grow: Modeling Real Life

Draw a pentagon to make a house. Draw 2 quadrilaterals to make windows and 1 quadrilateral to make a door. Draw an octagon to make a chimney.



Show and Grow *I can think deeper!*

10. Draw a pentagon to make a fish. Draw 4 triangles to make the fins. Draw a hexagon to make an eye.



11. You draw 5 quadrilaterals. How many sides and vertices do you draw in all?

_____ sides _____ vertices

12. **DIG DEEPER!** You draw an octagon and two pentagons. How many sides and vertices do you draw in all?

_____ sides _____ vertices

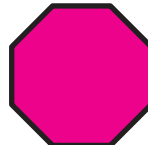
Learning Target: Identify and describe two-dimensional shapes.



triangle



quadrilateral



8 sides

8 vertices



octagons

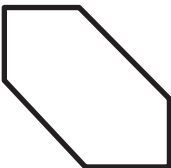


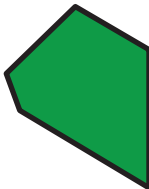
pentagon




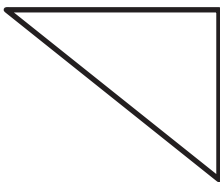
hexagon

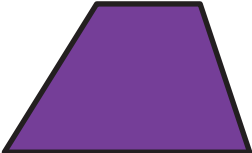


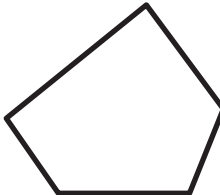
1.  _____ sides
 _____ vertices
 Shape: _____

2.  _____ sides
 _____ vertices
 Shape: _____

3.  _____ sides
 _____ vertices
 Shape: _____

4.  _____ sides
 _____ vertices
 Shape: _____

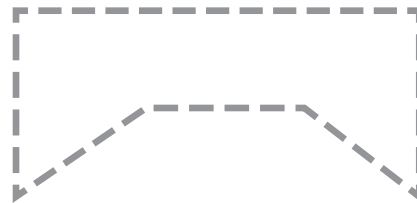
5.  _____ sides
 _____ vertices
 Shape: _____

6.  _____ sides
 _____ vertices
 Shape: _____

7. **MP Precision** Describe the shape in 3 ways.



8. **MP Modeling Real Life** Draw a hexagon to make a dog's body. Draw quadrilaterals for the head and tail. Draw two triangles for the ears.



9. **DIG DEEPER!** You draw a triangle and two hexagons. How many sides and vertices do you draw in all?

_____ sides _____ vertices

Review & Refresh

10. You are building a 34-foot fence. You build 15 feet on Saturday and 13 feet on Sunday. How many feet are left to build?

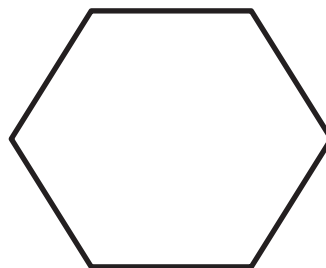
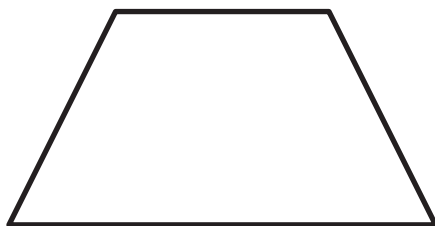
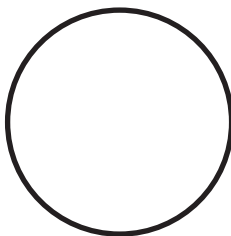
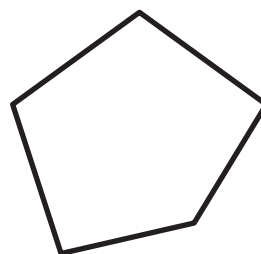
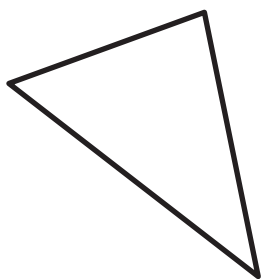
_____ feet

Learning Target: Identify
angles of a polygon.



Explore and Grow

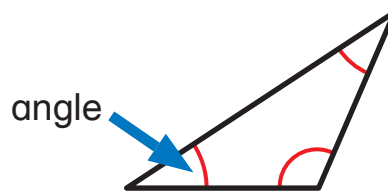
Color the triangle blue. Color the quadrilateral red.
Color the pentagon green. Color the hexagon orange.



MP Analyze a Problem Which shape is not colored?
How is it different from the other shapes?

Think and Grow

A **polygon** is a closed two-dimensional shape with 3 or more sides. When two sides meet, they form an **angle**.



A triangle has 3 angles.

A **right angle** forms an L-shaped vertex. The symbol **L** shows a right angle.



This quadrilateral has 4 angles.

Two of those angles are right angles.



Show and Grow *I can do it!*



How many right angles? _____

Shape: _____



How many right angles? _____

Shape: _____



How many right angles? _____

Shape: _____



How many right angles? _____

Shape: _____

Name _____



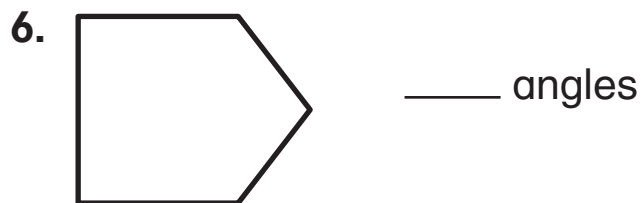
Apply and Grow: Practice



_____ angles

How many right angles? _____

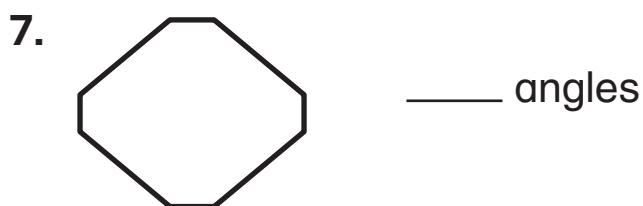
Shape: _____



_____ angles

How many right angles? _____

Shape: _____



_____ angles

How many right angles? _____

Shape: _____



_____ angles

How many right angles? _____

Shape: _____

9. Draw and name a polygon with 6 angles.

10. Draw and name a polygon with 2 right angles.

11. **Repeated Reasoning** Can you draw a polygon with 4 sides and 5 angles? Explain.



Think and Grow: Modeling Real Life

You are designing a road sign. The new sign must be a pentagon with only 2 right angles. Which signs might be yours?



Show and Grow *I can think deeper!*

12. You are making a sign for your lemonade stand. Your sign must be a quadrilateral with 4 right angles. Which signs might be yours?



13. You draw 3 pentagons. How many angles do you draw in all?

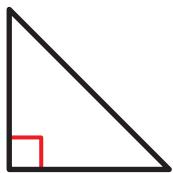
_____ angles

14. **DIG DEEPER!** You draw a quadrilateral and three triangles. Your friend draws an octagon and a hexagon. Who draws more angles in all? How many more?

You

Friend

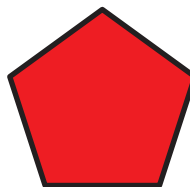
_____ more angles

Learning Target: Identify angles of a polygon.

_____ 3 angles

How many right angles? _____ 1

Shape: _____ triangle



_____ 5 angles

How many right angles? _____ 0

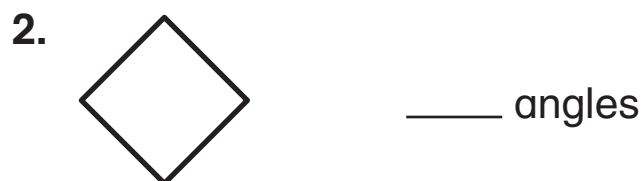
Shape: _____ pentagon



_____ angles

How many right angles? _____

Shape: _____



_____ angles

How many right angles? _____

Shape: _____



_____ angles

How many right angles? _____

Shape: _____



_____ angles

How many right angles? _____

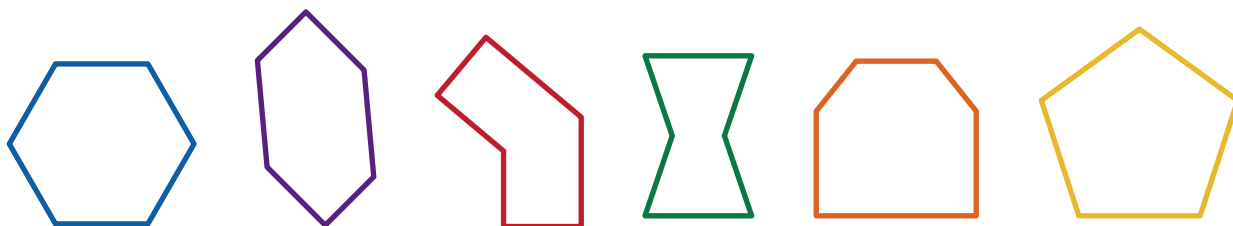
Shape: _____

5. Draw and name a polygon with 4 sides and 1 right angle.

6. Draw and name a polygon with 6 angles.

7. **DIG DEEPER!** Draw two polygons that have 9 angles in all.

8. **MP Modeling Real Life** You are designing a company logo. Your logo must be a hexagon with 2 right angles. Which logos might be yours?



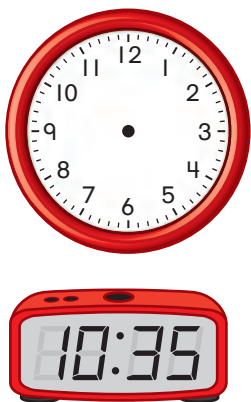
9. **DIG DEEPER!** You draw an octagon and two triangles. Your friend draws two quadrilaterals and a pentagon. Who draws more angles in all? How many more?

You Friend _____ more angles

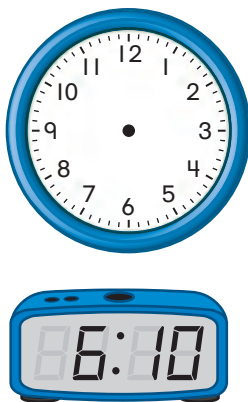
Review & Refresh

Draw to show the time.

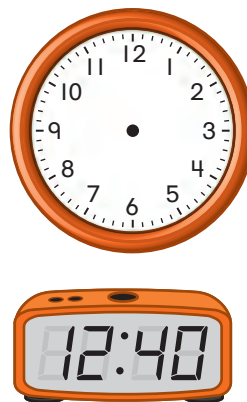
10.



11.



12.

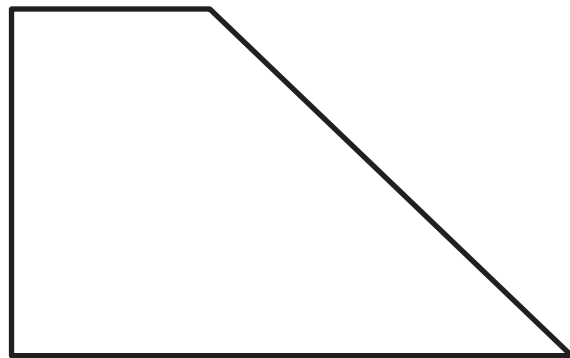
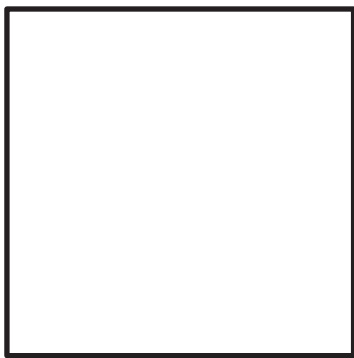


Learning Target: Draw shapes given a description.



Explore and Grow

Compare the shapes.

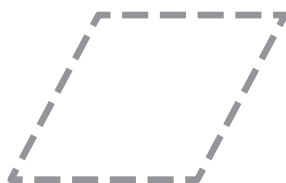


MP Structure How are the shapes the same? How are they different?

Think and Grow

Draw a polygon with 4 sides that are the same length.

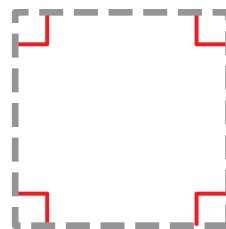
I drew a rhombus. A **rhombus** is a quadrilateral. It has 4 sides that are the same length.



4 angles

Polygon: rhombus

I drew a square. A square is a quadrilateral. It has 4 sides that are the same length and 4 right angles.



4 right angles

Polygon: square

Show and Grow *I can do it!*

1. Draw a polygon with 6 sides. Two of the sides are the same length.

_____ angles

Polygon: _____

2. Draw a polygon with 5 angles. One of the angles is a right angle.

_____ sides

Polygon: _____

Name _____



Apply and Grow: Practice

3. Draw a polygon with 3 angles. One of the angles is a right angle.

_____ sides

Polygon: _____

4. Draw a polygon with 1 more side than a triangle. No sides are equal.

_____ sides

Polygon: _____

5. Draw a polygon with 4 fewer angles than an octagon. All sides are equal. All angles are right angles.

_____ sides

Polygon: _____

6. Draw a polygon with 4 sides. Two pairs of sides are the same length.

_____ angles

Polygon: _____

7.  **Precision** Which is *not* a polygon with only 4 angles?

square

rectangle

rhombus

trapezoid

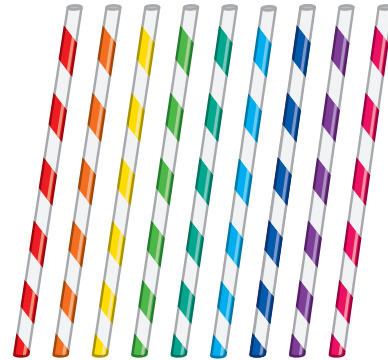
pentagon

quadrilateral



Think and Grow: Modeling Real Life

You have 9 straws. You use all the straws to create two polygons. Draw two polygons you can create. Write the names of the polygons.



Polygon 1: _____ Polygon 2: _____

Show and Grow *I can think deeper!*

8. You have 7 clay balls and some toothpicks. You create two polygons using the clay balls as vertices and the toothpicks as sides. Draw two polygons you can create. Write the names of the polygons.

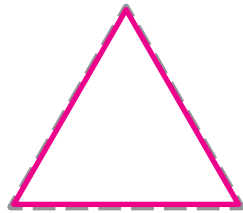
Polygon 1: _____ Polygon 2: _____

9. **DIG DEEPER!** You draw two different polygons. One of the polygons is a pentagon. You draw 11 sides in all. Draw a possible shape for your other polygon. Write the name of the polygon.

Polygon: _____

Learning Target: Draw shapes given a description.

Draw a polygon with 3 angles. All sides are the same length.



Polygon: 3 sides
triangle



1. Draw a polygon with 4 angles. There are no right angles. No sides are equal.

_____ sides

Polygon: _____

2. Draw a polygon with 8 sides. Two of the angles are right angles.

_____ angles

Polygon: _____

3. Draw a polygon with 2 more angles than a quadrilateral. Two of the angles are right angles.

_____ sides

Polygon: _____

4. Draw a polygon with 3 fewer sides than an octagon.

_____ angles

Polygon: _____

5. **MP Patterns** Draw 3 shapes. The first shape is a quadrilateral. The number of angles in each shape increases by two.

Name the third shape. _____

6. **MP Modeling Real Life** You have 9 apples and some sticks. You create two polygons using the apples for vertices and the sticks for sides. Draw two polygons you can create. Write the names of the polygons.

Polygon 1: _____

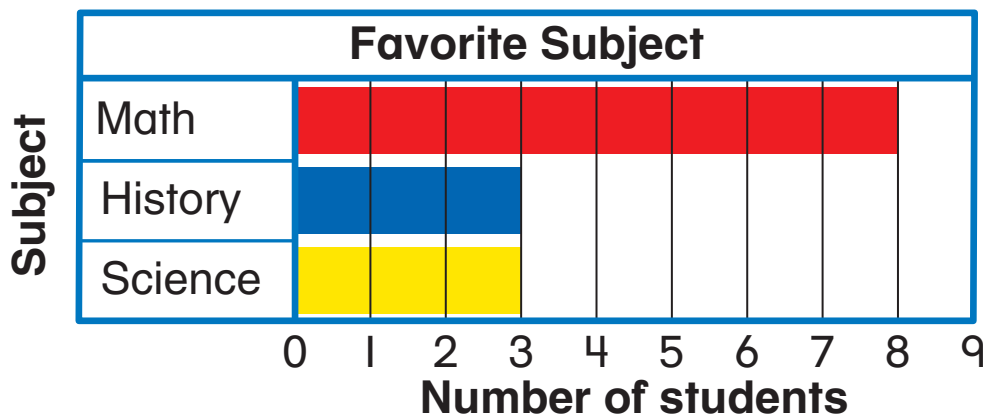
Polygon 2: _____

7. **DIG DEEPER!** You draw two different polygons. One of the polygons is an octagon. You draw 14 sides in all. Draw a possible shape for your other polygon. Write the name of the polygon.

Polygon: _____

Review & Refresh

8.



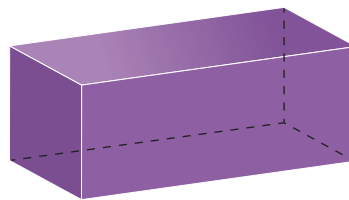
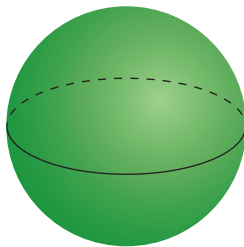
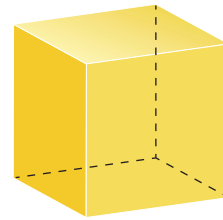
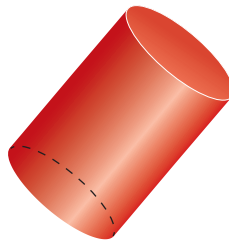
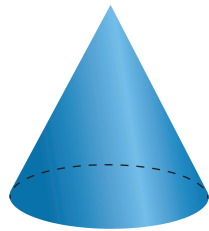
How many more students chose math than science? _____

Learning Target: Identify,
draw, and describe cubes.



Explore and Grow

Draw an X on the shapes with curved surfaces.
Circle the remaining shape with flat surfaces that
are all the same.

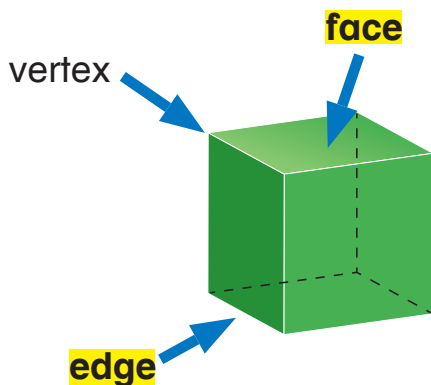


Name the shape you circled.

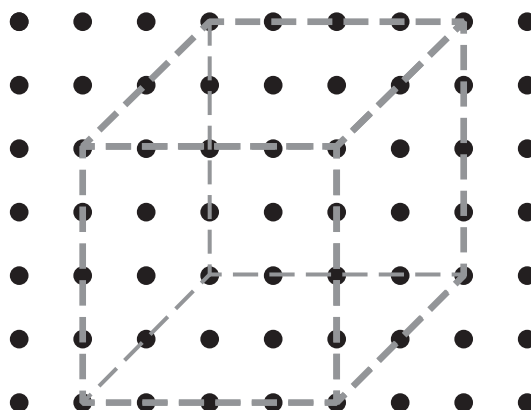


Think and Grow

Each face of a **cube** is a square.

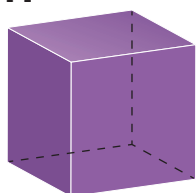


You can use dot paper to draw a cube.



Show and Grow *I can do it!*

1.



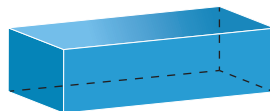
_____ faces

_____ vertices

_____ edges

Is it a cube? Yes No

2.



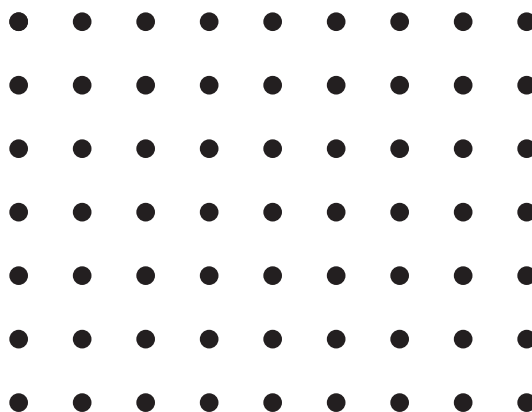
_____ faces

_____ vertices

_____ edges

Is it a cube? Yes No

3. Use the dot paper to draw a cube.

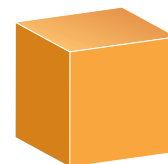
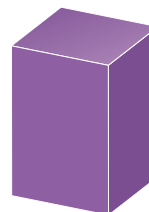
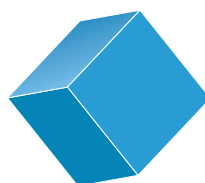
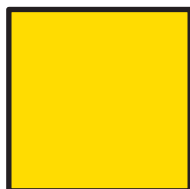
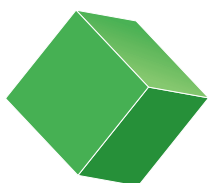


Name _____

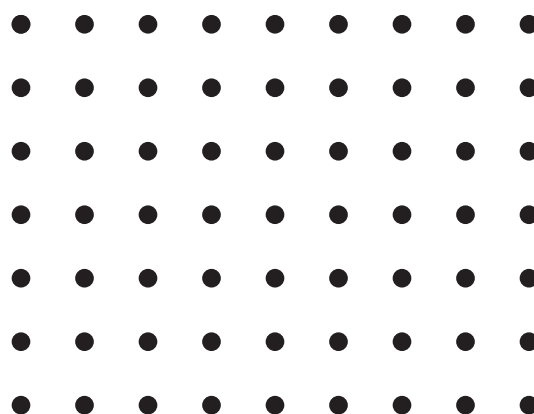


Apply and Grow: Practice

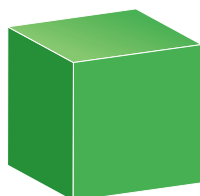
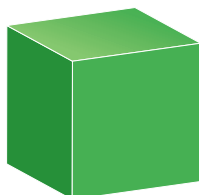
4. Which shapes are cubes?



5. Use the dot paper to draw a cube.

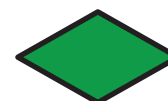
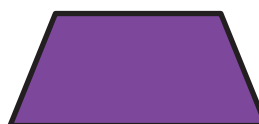


6. How many faces do two cubes have in all?



_____ faces

7. **MP Structure** Which two-dimensional shape makes up a cube? Name the shape.



A cube is made up of _____.



Think and Grow: Modeling Real Life

You make a ballot box for a school election. Your box is in the shape of a cube. Each face of the ballot box is a different color. How many colors do you use?

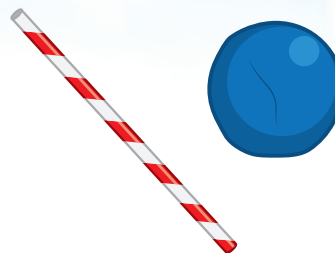


_____ colors

Show and Grow

I can think deeper!

8. You construct a cube. You use clay balls for the vertices and straws for the edges. How many clay balls do you make? How many straws do you use?



_____ clay balls

_____ straws

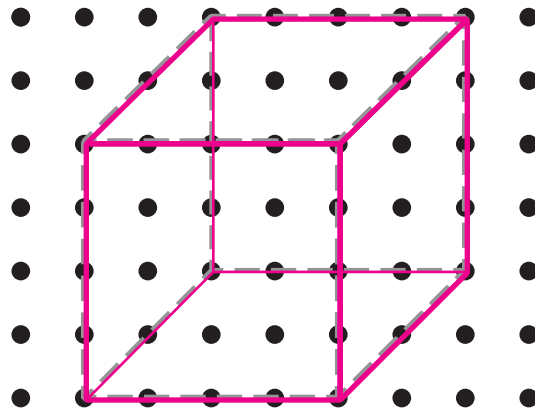
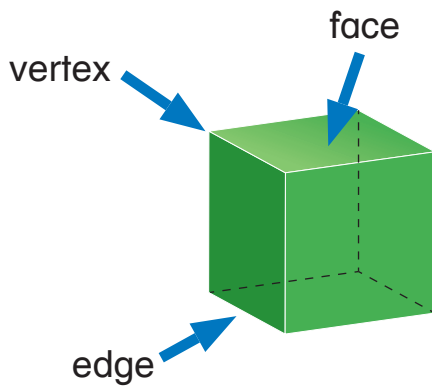
9. The faces of the number cube are numbered, starting with 1. Draw and label all the faces of the number cube.



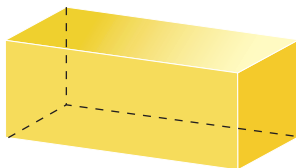
10. **DIG DEEPER!** You have 48 toothpicks and 32 grapes. You use all of the materials to make cubes using the toothpicks as edges and the grapes as vertices. How many cubes do you make?

_____ cubes

Learning Target: Identify, draw, and describe cubes.



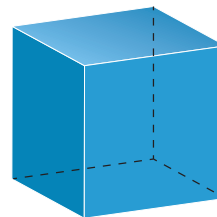
1.



_____ faces
 _____ vertices
 _____ edges

Is it a cube? Yes No

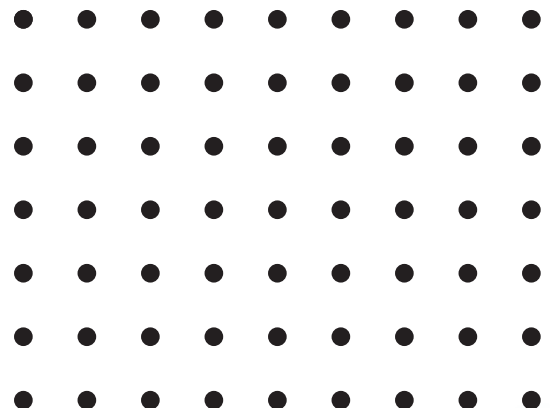
2.



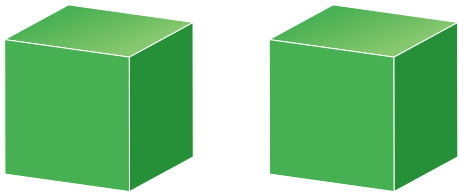
_____ faces
 _____ vertices
 _____ edges

Is it a cube? Yes No

3. Use the dot paper to draw a cube.

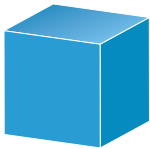


4. How many vertices do two cubes have in all?

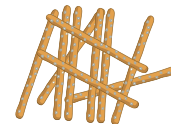


_____ vertices

5. **MP YOU BE THE TEACHER** Newton says the cube has 3 faces. Is he correct? Explain.



6. **MP Modeling Real Life** You construct a cube. You use marshmallows for the vertices and pretzel rods for the edges. How many marshmallows do you use? How many pretzel rods do you use?



_____ marshmallows _____ pretzel rods

7. **DIG DEEPER!** You have 24 cotton balls and 36 toothpicks. You use all of the materials to make cubes using the cotton balls as vertices and the toothpicks as edges. How many cubes do you make?



_____ cubes

Review & Refresh

8. $43 - 5 =$ _____

9. $62 - 6 =$ _____

10. _____ $= 41 - 4$

11. _____ $= 44 - 7$

Learning Target: Show a rectangle as equal squares.



Explore and Grow

How many square tiles do you need to cover the rectangle?



_____ squares



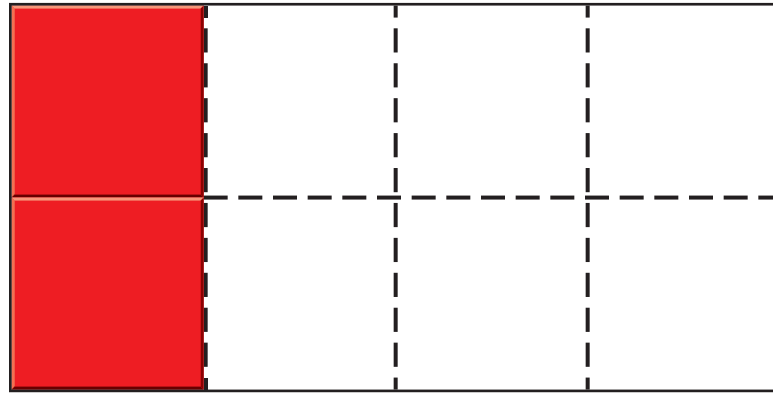
Use Equations Write an equation to match your model.

Think and Grow

You can add the square tiles by rows or by columns.



How many square tiles cover this rectangle?



Number of rows: 2 Number of columns: 4

Add by rows: 4 + 4 = 8

Add by columns: 2 + 2 + 2 + 2 = 8

Total square tiles: 8

Show and Grow *I can do it!*

- I. Use square tiles to cover the rectangle.
Draw to show your work.

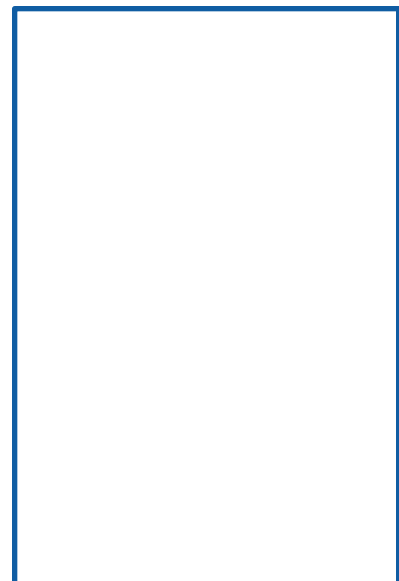
Complete the statements.

Add by rows:

_____ + _____ + _____ = _____

Add by columns: _____ + _____ = _____

Total square tiles: _____

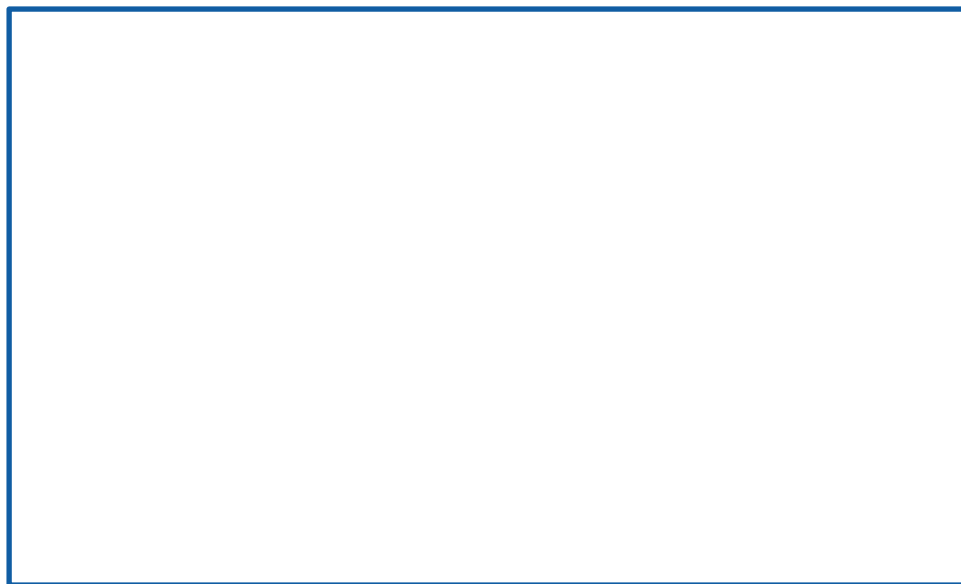


Name _____



Apply and Grow: Practice

2. Use square tiles to cover the rectangle. Draw to show your work.



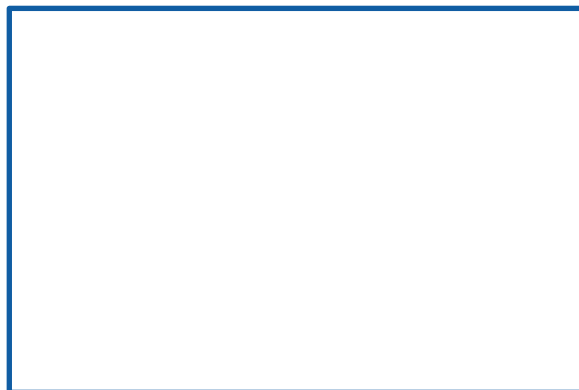
Complete the statements.

Add by rows: $\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

Add by columns: $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

Total square tiles: $\underline{\quad}$

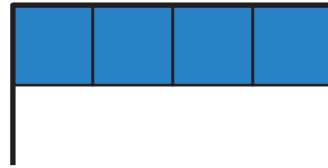
3. **MP Precision** Divide the rectangle into 6 equal parts.





Think and Grow: Modeling Real Life

You use foam mats to cover the entire floor of a square room. You fit 4 mats across one side of the room. How many rows and columns of mats will you have?



_____ rows _____ columns

How many foam mats do you use to cover the entire floor?

Addition equation:

_____ foam mats

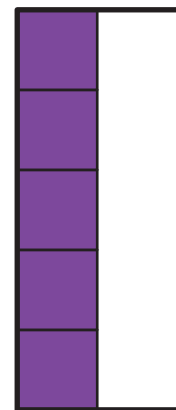
Show and Grow *I can think deeper!*

4. You use square tiles to cover the floor of a square room. You fit 5 tiles across one side of the room. How many rows and columns of tiles will you have?

_____ rows _____ columns

DIG DEEPER!

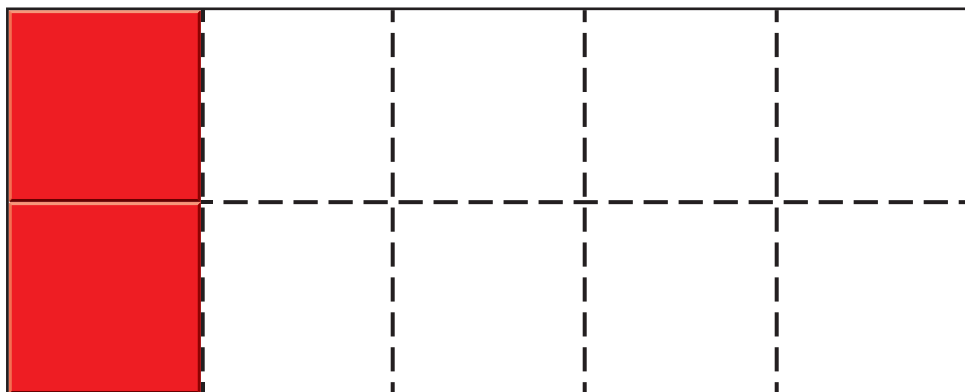
How many tiles do you use to cover the entire floor?



_____ tiles

Learning Target: Show a rectangle as equal squares.

How many square tiles cover this rectangle?



Number of rows: 2

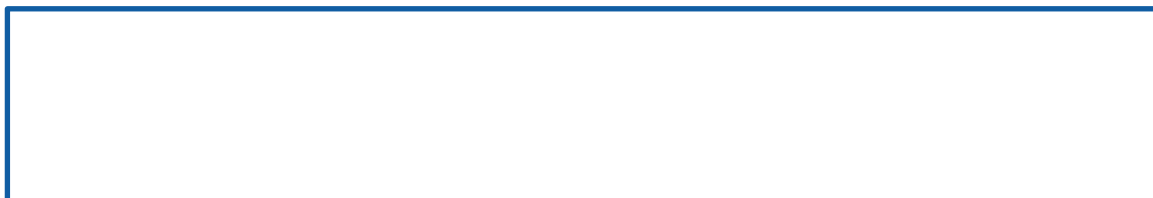
Number of columns: 5

Add by rows: 5 + 5 = 10

Add by columns: 2 + 2 + 2 + 2 + 2 = 10

10 total square tiles

- I. Use square tiles to cover the rectangle. Draw to show your work.



Complete the statements.

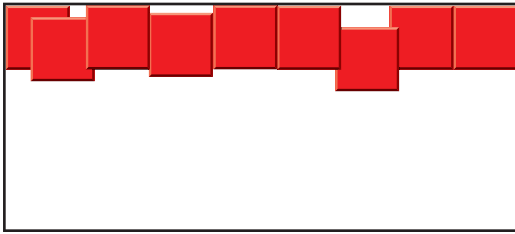
Add by rows: _____ = _____

Total square tiles: _____

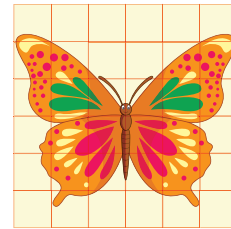
Add by columns:

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

2. **Writing** Newton wants to cover the rectangle with square tiles. Explain what he is doing wrong.



3. **MP Modeling Real Life** You use square glass tiles to make a square mosaic picture. You fit 6 tiles across one side of the picture. How many rows and columns of tiles will you have?



_____ rows _____ columns

DIG DEEPER! How many glass tiles do you use to cover the entire picture?

_____ glass tiles

Review & Refresh

4. Circle *a.m.* or *p.m.*

Take the bus to school



a.m.

p.m.

Sunset



a.m.

p.m.

Name _____

Identify Two,
Three, or Four
Equal Shares

15.6

Learning Target: Identify shapes that show halves, thirds, and fourths.



Explore and Grow

Sort the Equal Share Cards.

Two Equal Shares

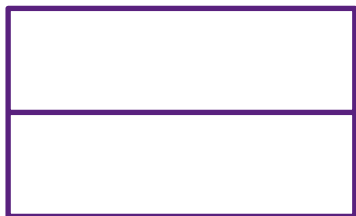
Three Equal Shares

Four Equal Shares

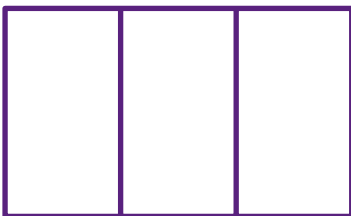
Unequal Shares



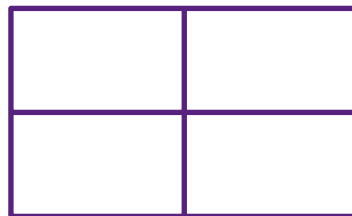
Think and Grow



The rectangle has 2 equal shares, or **halves**. Half of the rectangle is one of the equal shares.



The rectangle has 3 equal shares, or **thirds**. A third of the rectangle is one of the equal shares.



The rectangle has 4 equal shares, or **fourths**. A fourth of the rectangle is one of the equal shares.

Show and Grow *I can do it!*

Circle the shape that shows halves.

1.



2.



Circle the shape that shows thirds.

3.



4.



Circle the shape that shows fourths.

5.



6.

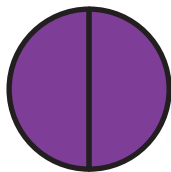


Name _____

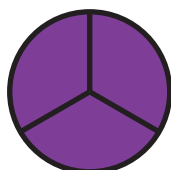


Apply and Grow: Practice

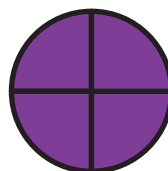
7. Which shapes show halves?



8. Which shapes show thirds?



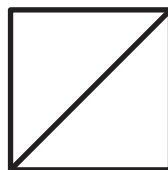
9. Which shapes show fourths?



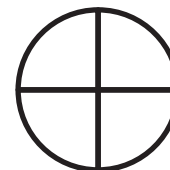
10. Color a third of the shape.



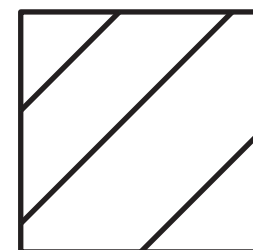
11. Color half of the shape.



12. Color a fourth of the shape.



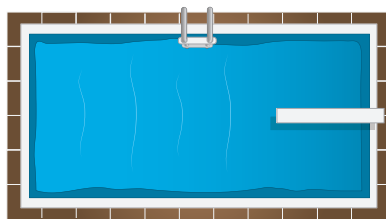
13. **MP YOU BE THE TEACHER** Newton says the shape shows fourths. Is he correct? Explain.





Think and Grow: Modeling Real Life

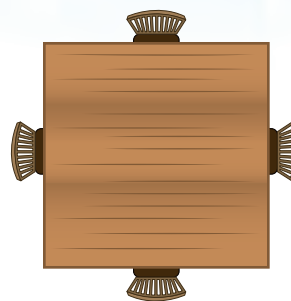
You want to play 3 games in the pool. Each game needs an equal share of the pool. Show how you could divide the pool.



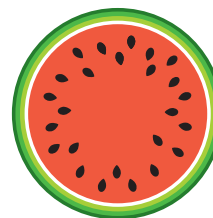
Show and Grow

I can think deeper!

14. 2 friends are making crafts. Each friend wants an equal share of the table. Show how the friends could divide the table.



15. You and 3 friends want to share the piece of watermelon. Show how to cut the piece of watermelon so you and your friends each get an equal share.

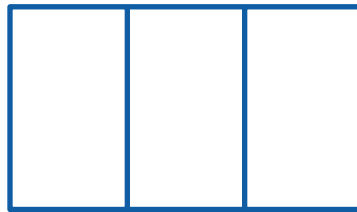


Justify a Result How did you know how many equal shares to cut?

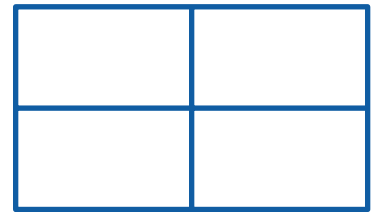
Learning Target: Identify shapes that show halves, thirds, and fourths.



Halves

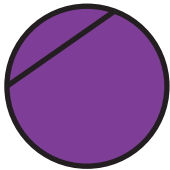


Thirds

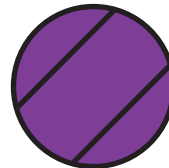
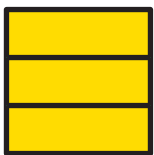


Fourths

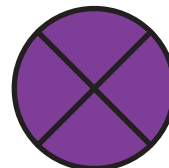
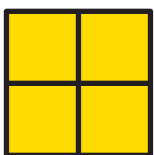
1. Which shapes show halves?



2. Which shapes show thirds?



3. Which shapes show fourths?



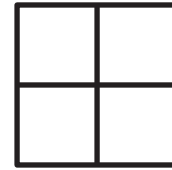
4. Color a third of the shape.



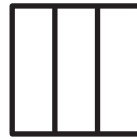
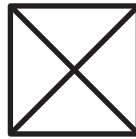
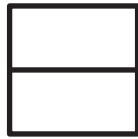
5. Color half of the shape.



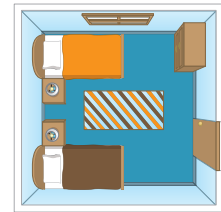
6. Color a fourth of the shape.



7. **MP Patterns** Draw what comes next.



8. **MP Modeling Real Life** Newton and Descartes share a bedroom. Show how they could divide their room into equal shares.



9. **MP Modeling Real Life** You and 2 friends are making a poster. Each friend wants an equal share of the poster. Show how the friends could divide the poster.



- MP Analyze a Problem** How else can you divide the poster? Which way do you prefer? Explain.

Review & Refresh

10. A pen is 16 centimeters tall. A pen holder is 11 centimeters tall. How much taller is the pen than the pen holder?

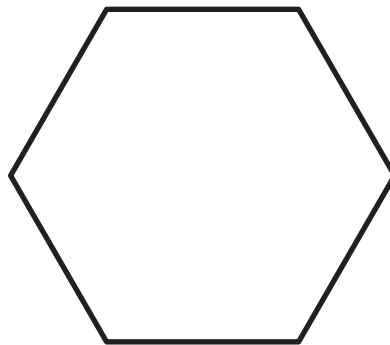
_____ centimeters



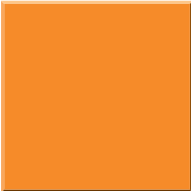
Learning Target: Draw lines to show halves, thirds, and fourths of a shape.



Explore and Grow

Which pattern blocks can you use to model equal shares of the hexagon?



Shape	Equal Shares	Number of Equal Shares
	Yes No	
	Yes No	
	Yes No	



Think and Grow

Draw lines to show equal shares. Complete the sentences.

halves



Each share is a half of the whole.

The whole is 2 halves.

thirds



Each share is a third of the whole.

The whole is 3 thirds.

fourths



Each share is a fourth of the whole.

The whole is 4 fourths.

Show and Grow *I can do it!*

Draw lines to show equal shares. Complete the sentences.

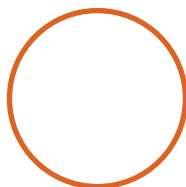
1. fourths



Each share is a _____ of the whole.

The whole is _____.

2. halves



Each share is a _____ of the whole.

The whole is _____.

Name _____



Apply and Grow: Practice

3. Draw lines to show equal shares. Complete the sentences.

thirds

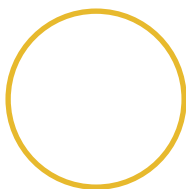


Each share is a _____ of the whole.

The whole is _____.

Draw lines to show equal shares. Which word describes the parts?

4. 4 equal parts



halves

thirds

fourths

5. 3 equal parts



halves

thirds

fourths

6. 2 equal parts

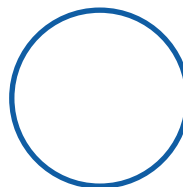


halves

thirds

fourths

7. 3 equal parts



halves

thirds

fourths

8.  **Precision** Draw lines to show thirds. Color 3 thirds.

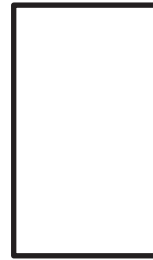
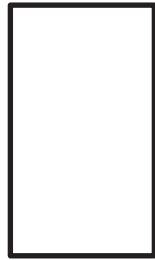




Think and Grow: Modeling Real Life

You have 2 towels that are the same size. Half of one towel is green. A fourth of the other towel is yellow. Is the green share or the yellow share larger? Explain.

Draw to show:



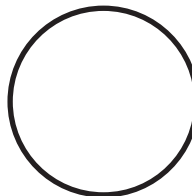
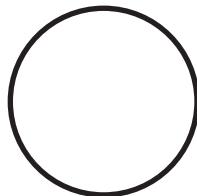
Which share is larger?

Green share

Yellow share

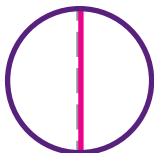
Show and Grow *I can think deeper!*

9. You have 2 rugs that are the same size. A fourth of one rug is red. A third of the other rug is blue. Is the red share or the blue share smaller? Explain.



Learning Target: Draw lines to show halves, thirds, and fourths of a shape.

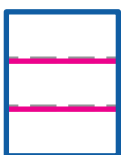
halves



Each share is a half of the whole.

The whole is 2 halves.

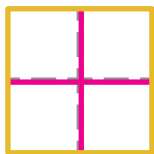
thirds



Each share is a third of the whole.

The whole is 3 thirds.

fourths



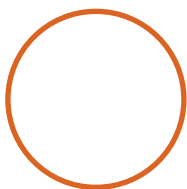
Each share is a fourth of the whole.

The whole is 4 fourths.



Draw lines to show equal shares. Complete the sentences.

1. thirds



Each share is a _____ of the whole.

The whole is _____.

2. halves

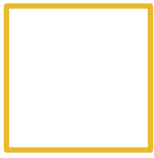


Each share is a _____ of the whole.

The whole is _____.

Draw lines to show equal shares. Complete the sentences.

3. fourths



Each share is a _____ of the whole.

The whole is _____.

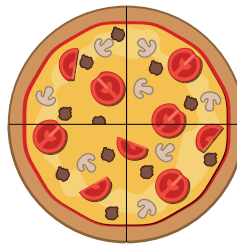
4. **MP Logic** Complete the sentences.

1 whole is _____ halves.

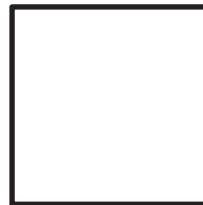
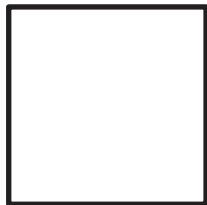
1 whole is _____ thirds.

1 whole is _____ fourths.

5. **DIG DEEPER!** Descartes cuts a pizza into fourths. How can he cut the pizza to feed 8 friends?



6. **MP Modeling Real Life** You have 2 blankets that are the same size. A third of one blanket is yellow. A half of the other blanket is purple. Is the yellow share or the purple share smaller? Explain.



Review & Refresh

7. $150 + 610 = \underline{\hspace{2cm}}$

8. $553 + 250 = \underline{\hspace{2cm}}$

Name _____

Analyze Equal Shares of the Same Shape

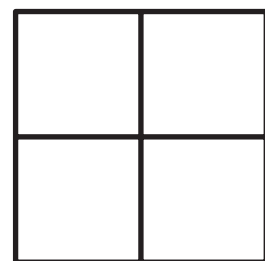
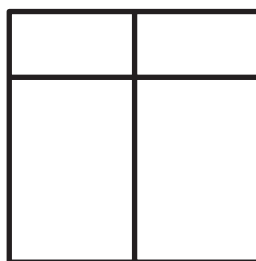
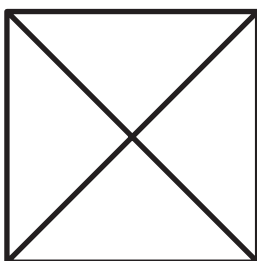
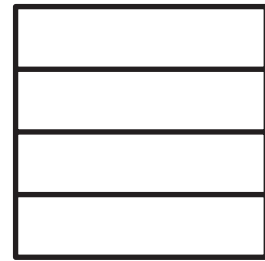
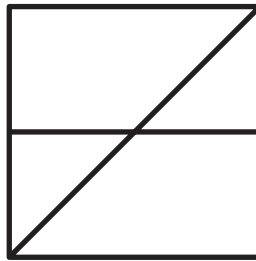
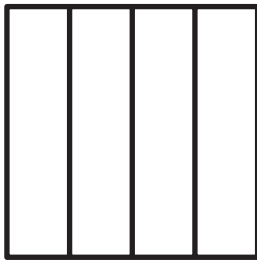
15.8

Learning Target: Draw to show halves, thirds, and fourths in different ways.



Explore and Grow

Color the squares that show equal shares.



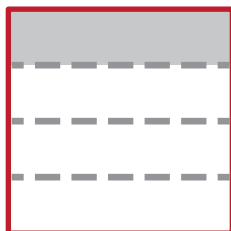
MP Analyze a Problem How are the squares you colored the same? How are they different?

Think and Grow

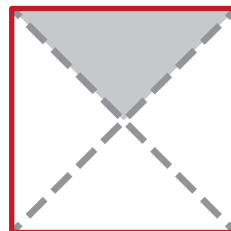
Wow! Equal shares of a shape do not have to be the same shape.



Draw lines to show fourths in two different ways. Color one-fourth of each square.



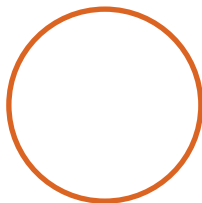
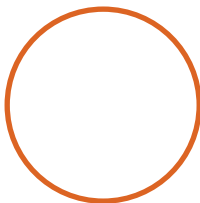
One-fourth of this square is a rectangle.



One-fourth of this square is a triangle.

Show and Grow *I can do it!*

1. Draw lines to show halves in two different ways.
Color one-half of each circle.



Think: How are the halves of each circle the same?
How are they different?

2. Draw lines to show thirds in two different ways.
Color one-third of each rectangle.



Think: How are the thirds of each rectangle the same?
How are they different?

Name _____



Apply and Grow: Practice

3. Draw lines to show fourths two different ways.
Color one-fourth of each circle.



4. Draw lines to show thirds two different ways.
Color one-third of each square.



5. Draw lines to show halves two different ways.
Color one-half of each rectangle.

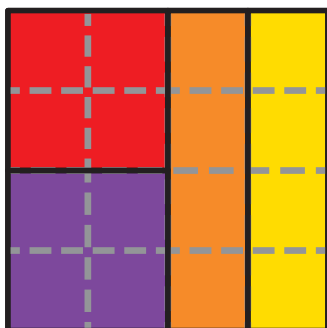


Use Math Tools

How can you use a ruler to make sure the lines you draw show halves?



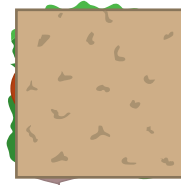
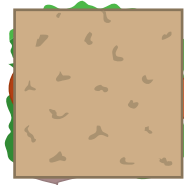
6. **DIG DEEPER!** Explain how you know each color is a fourth of the whole square.





Think and Grow: Modeling Real Life

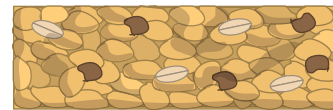
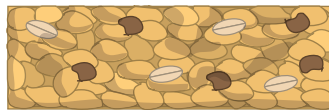
You and your friend each cut a sandwich into fourths different ways. The sandwiches are the same size. Show how you and your friend can cut the sandwiches.



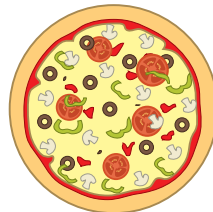
Show and Grow

I can think deeper!

7. You, Newton, and Descartes each cut a granola bar into halves different ways. The granola bars are the same size. Show how you, Newton, and Descartes can cut the granola bars.



8. **DIG DEEPER!** There are 2 pizzas that are the same size. 6 friends each want an equal share of the pizzas. Should the pizzas be cut into halves, thirds, or fourths? Explain.



Halves

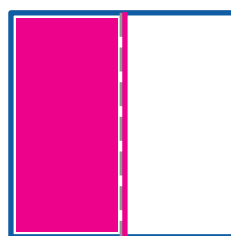
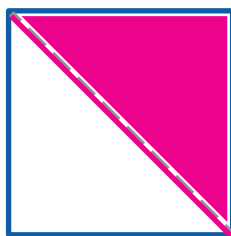
Thirds

Fourths

Learning Target: Draw to show halves, thirds, and fourths in different ways.

Draw lines to show halves two different ways.
Color one-half of each square.

Wow! Equal shares of
a shape do not have to
be the same shape!

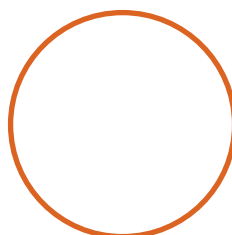
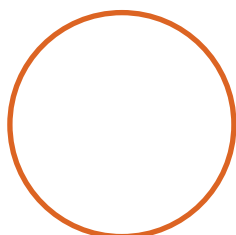


1. Draw lines to show fourths two different ways.
Color one-fourth of each rectangle.

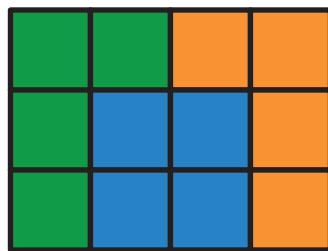
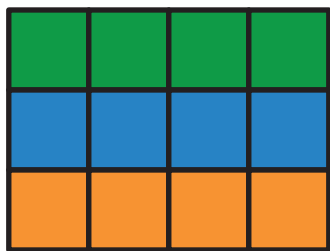


Think: How are the fourths of each rectangle the same?
How are they different?

2. Draw lines to show thirds two different ways.
Color one-third of each circle.



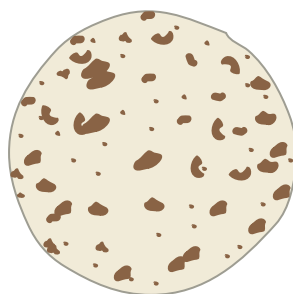
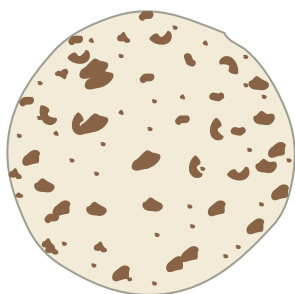
3. **MP Reasoning** Descartes says there are only two ways to divide a rectangle into 3 equal shares. Is he correct? Explain.



4. **MP Modeling Real Life** You and your friend each cut a loaf of bread into thirds different ways. The loaves of bread are the same size. Show how you and your friend can cut the loaves of bread.



5. **DIG DEEPER!** There are 2 quesadillas that are the same size. 8 friends each want an equal share of the quesadillas. Should the quesadillas be cut into halves, thirds, or fourths? Explain.



Halves

Thirds

Fourths

Review & Refresh

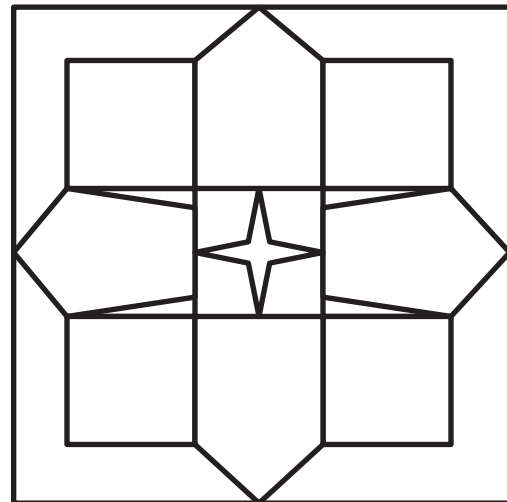
6. $841 - 603 = \underline{\hspace{2cm}}$

7. $439 - 210 = \underline{\hspace{2cm}}$

You paint a square suncatcher in art class.

1. You paint each shape a different color. Color to show how you paint the sun catcher.

- Each triangle is red.
- Each octagon is orange.
- Each pentagon with more than 1 right angle is yellow.
- The rest of the pentagons are green.
- Each shape with 6 angles is blue.
- Each quadrilateral with all right angles is purple.
- The rest of the quadrilaterals are pink.

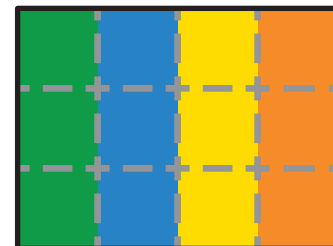


2. The length of one side of the suncatcher is 12 inches.
What are the lengths of the other sides?

_____ inches

3. Your friend paints a rectangular suncatcher.

- a. What share of your friend's design is blue?

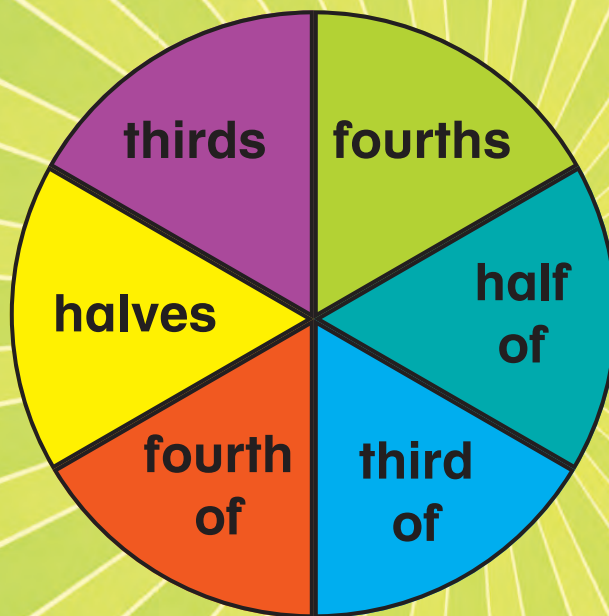
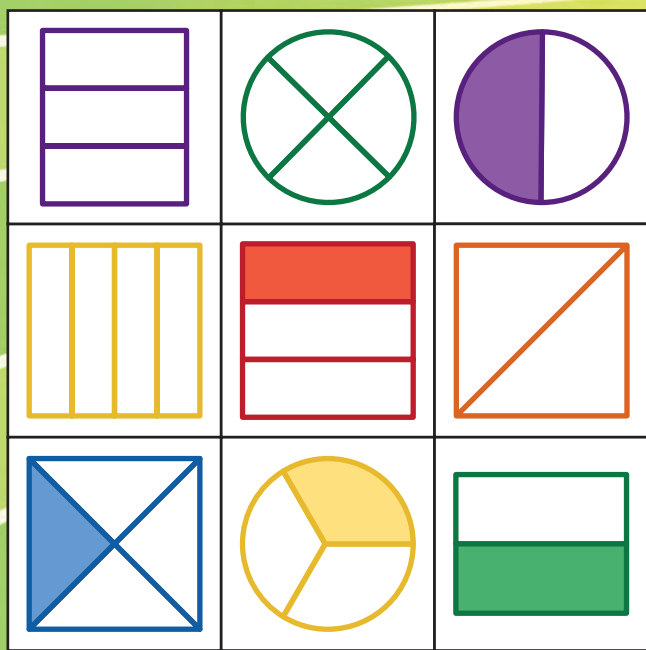
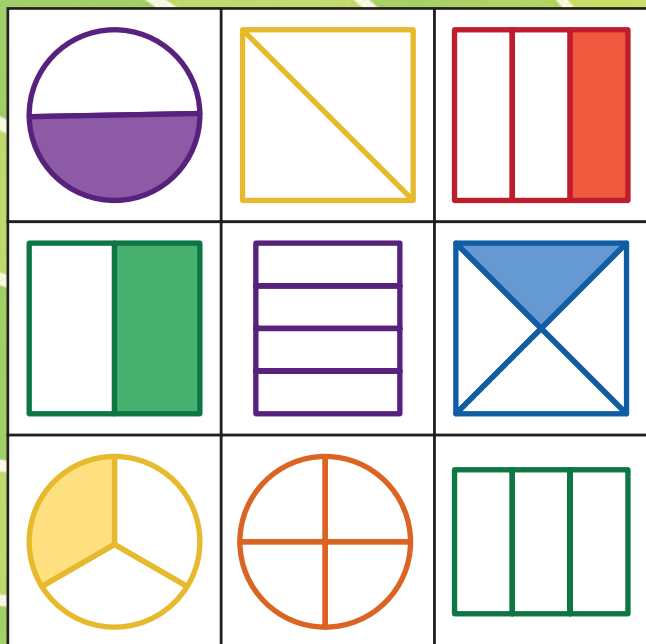


- b. What share of your friend's design is orange or yellow?

Three In a Row: Equal Shares

To Play: Players take turns. On your turn, spin the spinner. Cover a square that matches your spin. Continue playing until a player gets three in a row.

Game A



Game B

15.1

Describe Two-Dimensional Shapes

1.



_____ sides

_____ vertices

Shape: _____

2.



_____ sides

_____ vertices

Shape: _____

3. **MP Modeling Real Life** You draw three quadrilaterals and an octagon. How many sides and vertices do you draw in all?

_____ sides _____ vertices

15.2

Identify Angles of Polygons

4.

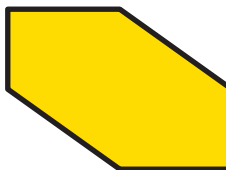


_____ angles

How many right angles? _____

Shape: _____

5.



_____ angles

How many right angles? _____

Shape: _____

6. Draw and name a shape with 2 right angles.

15.3

Draw Polygons

7. Draw a polygon with 4 angles.
All sides are equal length.

_____ sides

Polygon: _____

8. Draw a polygon with 5 sides.
Two of the angles are right angles.

_____ angles

Polygon: _____

15.4

Identify and Draw Cubes

9.



_____ faces

_____ vertices

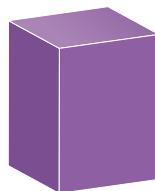
_____ edges

Is it a cube?

Yes

No

10.



_____ faces

_____ vertices

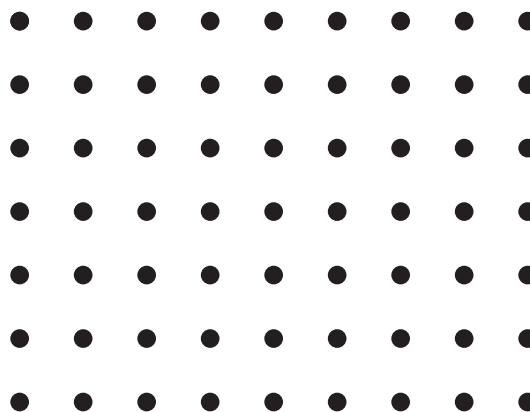
_____ edges

Is it a cube?

Yes

No

11. Use the dot paper to draw a cube.



15.5 Compose Rectangles

12. Use square tiles to cover the rectangle.
Draw to show your work.

Complete the statements.

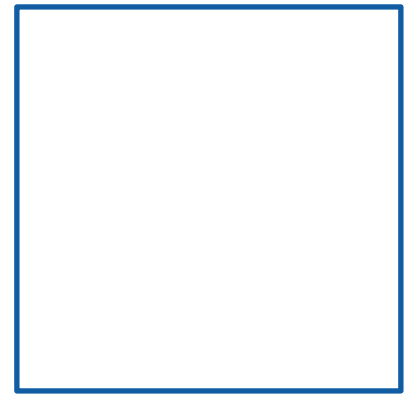
Add by rows:

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Add by columns:

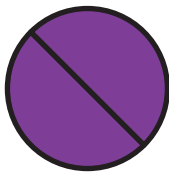
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Total square tiles: $\underline{\hspace{2cm}}$

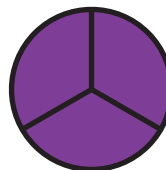


15.6 Identify Two, Three, or Four Equal Shares

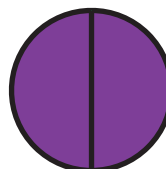
13. Which shapes show halves?



14. Which shapes show thirds?



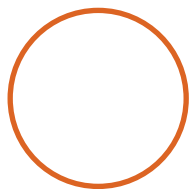
15. Which shapes show fourths?



15.7 Partition Shapes into Equal Shares

Draw lines to show equal parts. Complete the sentences.

16. thirds



Each share is a _____ of the whole.

The whole is _____.

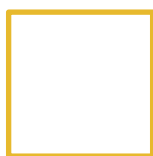
17. halves



Each share is a _____ of the whole.

The whole is _____.

18. fourths



Each share is a _____ of the whole.

The whole is _____.

15.8 Analyze Equal Shares of the Same Shape

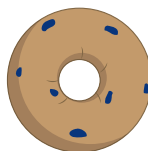
19. **MP Modeling Real Life** There are 3 bagels that are the same size. 6 friends each want an equal share of the bagels. Should the bagels be cut into halves, thirds, or fourths? Explain.



Halves



Thirds



Fourths

1. Your bed is 39 inches long. Your comforter is 66 inches long. How much longer is the comforter than the bed?



- ☐ 105 inches ☐ 37 inches
☐ 33 inches ☐ 27 inches

-
2. Find each difference.

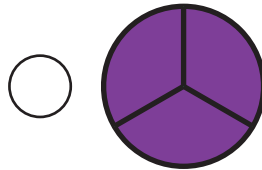
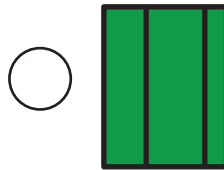
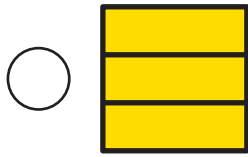
$$700 - 465 = \underline{\hspace{2cm}} \quad 910 - 186 = \underline{\hspace{2cm}} \quad 302 - 176 = \underline{\hspace{2cm}}$$

-
3. A dog park is 48 yards long. Your dog enters the park and runs 29 yards. You run 13 yards. How far is your dog from the other end of the park?

- ☐ 19 yards ☐ 35 yards
☐ 90 yards ☐ 6 yards



4. Which shapes show thirds?



5. The girls' soccer team raises \$237. The boys' soccer team raises \$113 more. How much money do both teams raise in all?

☐ \$113

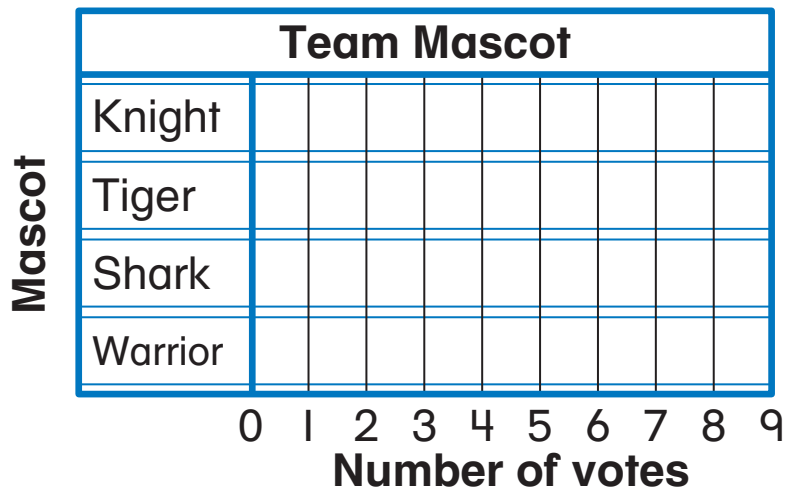
☐ \$350

☐ \$587

☐ \$124

6. Complete the bar graph.

Team Mascot	
Knight	
Tiger	
Shark	
Warrior	



What mascot got the most votes? _____

How many more votes did Warrior get than Tiger? _____

7. Count on to find the total value.



Total value: _____

8. Which expressions have a difference of 34?

☐ $60 - 34$

☐ $86 - 50 - 2$

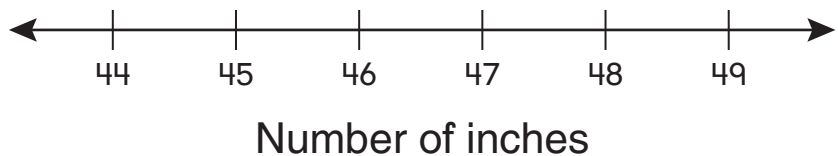
☐ $40 - 6$

☐ $54 - 20$

9. Complete the line plot. Then choose all of the statements that are true.

Child Heights (Inches)	
Child 1	44
Child 2	47
Child 3	45
Child 4	49
Child 5	45
Child 6	45
Child 7	49
Child 8	47

Student Heights



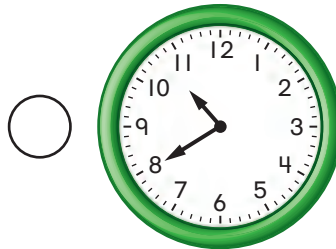
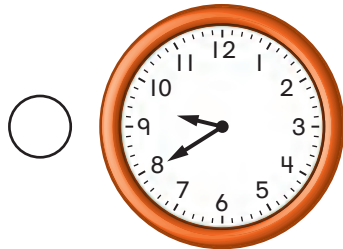
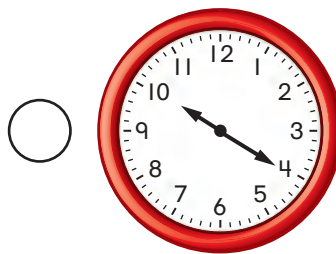
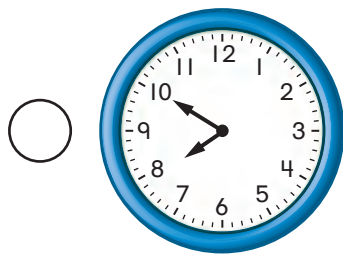
☐ Three students are 45 inches tall.

☐ Two students are taller than 46 inches.

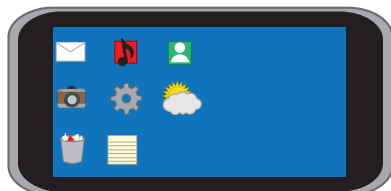
☐ The most common height is 47 inches.

☐ Five students are 45 inches or 49 inches tall.

10. Which clock shows 10:40?



11. The phone is about 12 centimeters long. What is the best estimate for the length of the tablet?



☐ 6 centimeters

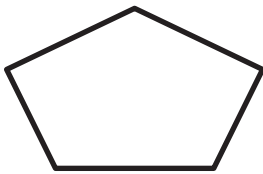
☐ 24 centimeters

☐ 36 centimeters

☐ 15 centimeters

12.  _____ sides
_____ vertices

Shape: _____

 _____ sides
_____ vertices

Shape: _____