Chapter 26

Name _____

Classify Two-Dimensional Quadrilaterals and Identify Line Symmetry

Show What You Know

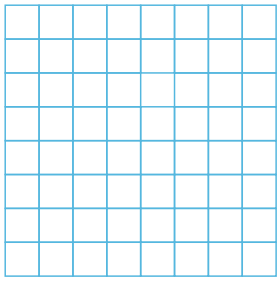
Plane Shapes

1. Color the polygons with 4 vertices blue.

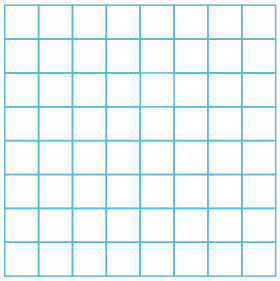
2. Color the quadrilaterals red.

Drawing Shapes

3. Draw a shape with 5 sides.



4. Draw a shape with 6 vertices.



MATH in the Real World

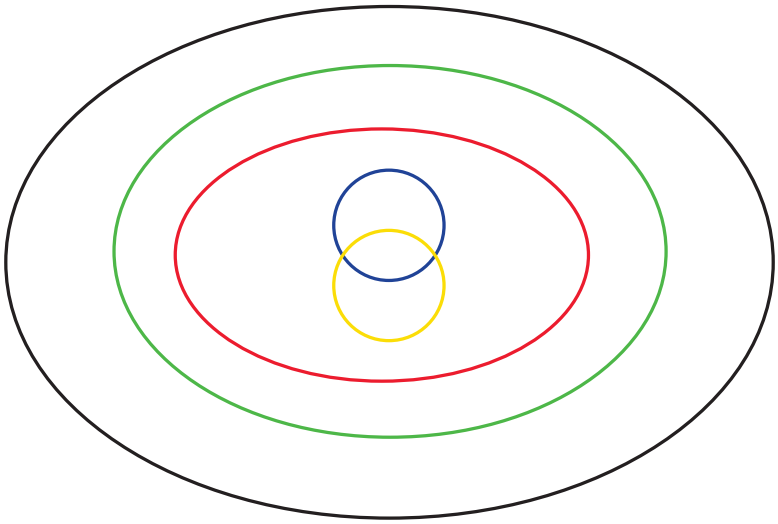
The Isle of Wight Natural History Centre, off the coast of England, has shells of every size, shape, and color. Many shells have symmetry. Investigate this shell. Describe its shape in geometric terms. Then determine whether this shell has line symmetry.

Vocabulary Builder

Go Online For more help

Visualize It

Complete the diagram by using the words with a ✓.



Connect to Vocabulary

Review Words

- ✓ parallelogram
- ✓ quadrilateral
- ✓ rectangle
- ✓ rhombus
- right angle
- ✓ square
- ✓ trapezoid
- vertex

Preview Words

- line symmetry
- line of symmetry
- Venn diagram

Understand Vocabulary

Complete each sentence.

1. A _____ visually shows the relationship among parts of a group.

2. A _____ divides a shape into two parts that are the exact same size and shape.

3. A shape has _____ if it can be folded along a line so that its two parts match exactly.

4. A _____ is the shared endpoint of an angle.

5. A _____ is an angle that forms a square corner.

Name _____

Draw Quadrilaterals

I Can draw and identify quadrilaterals.

Florida's B.E.S.T.

- **Geometric Reasoning** 3.GR.1.2
- **Mathematical Thinking & Reasoning** MTR.1.1, MTR.2.1, MTR.4.1, MTR.5.1, MTR.6.1

UNLOCK the Problem

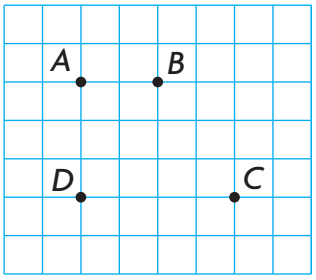
CONNECT You have learned to classify quadrilaterals by recognizing parallel sides, sides of equal length, and right angles.

How can you draw quadrilaterals?

Activity 1 Use grid paper to draw quadrilaterals.

Materials ■ ruler

- Use a ruler to draw line segments from points A to B, from B to C, from C to D, and from D to A.
- Write the name of your quadrilateral.

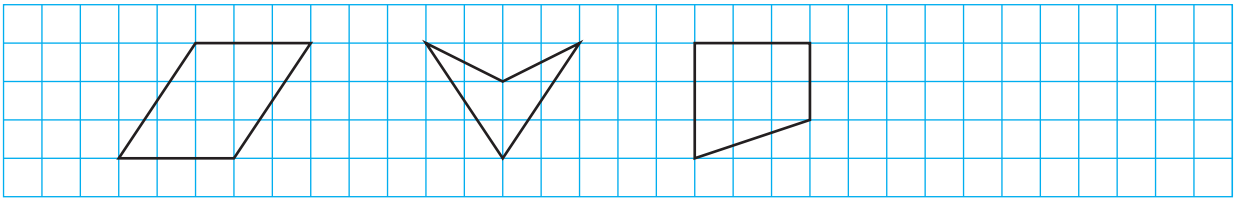


_____

Activity 2 Draw a shape that does not belong.

Materials ■ ruler

A **Here are three examples of a quadrilateral. Draw an example of a polygon that is not a quadrilateral.**

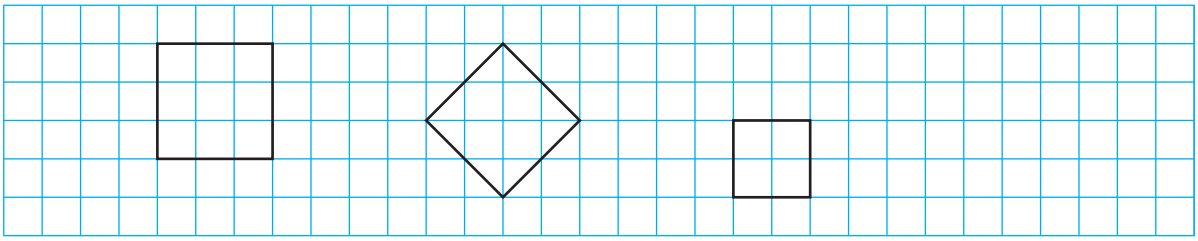


- Explain why your polygon is not a quadrilateral.

_____

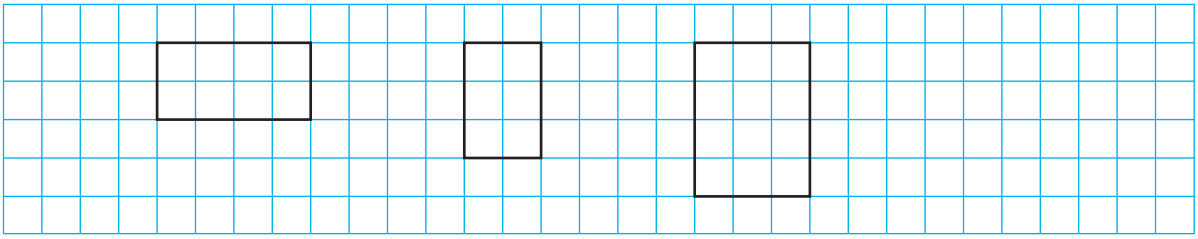
_____

B **Here are three examples of a square.**
Draw a quadrilateral that is not a square.



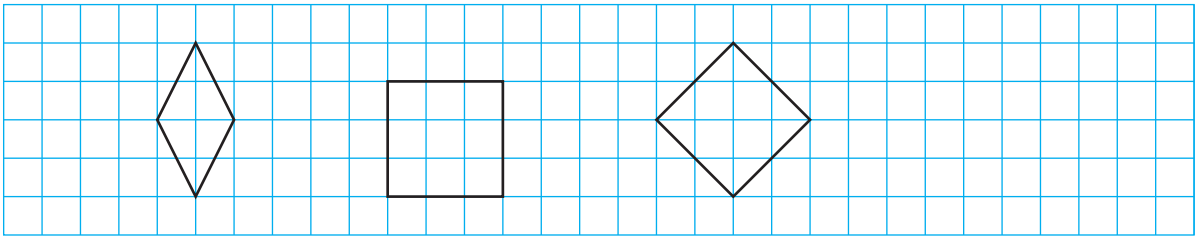
- Explain why your quadrilateral is not a square.

C **Here are three examples of a rectangle.**
Draw a quadrilateral that is not a rectangle.



- Explain why your quadrilateral is not a rectangle.

D **Here are three examples of a rhombus.**
Draw a quadrilateral that is not a rhombus.



- Explain why your quadrilateral is not a rhombus.

Math Talk

MTR 4.1 **Engage in discussions on mathematical thinking.**

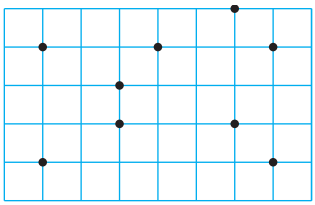
Compare your drawings with your classmates. Explain how your drawings are alike and how they are different.

Name _____

Share and Show

Math Board

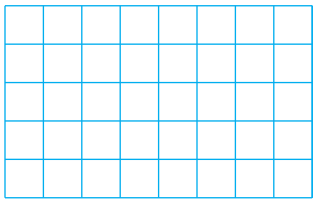
1. Choose four endpoints, and connect them to make a rectangle.



Think: A rectangle has 2 pairs of opposite sides that are parallel, 2 pairs of sides of equal length, and 4 right angles.

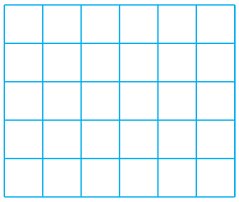
Draw a quadrilateral that fits the description. Name the quadrilateral you drew.

2. 2 pairs of sides of equal length



Name _____

3. 4 sides of equal length



Name _____

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

Explain one way the quadrilaterals you drew are alike and one way they are different.

On Your Own

Use grid paper to draw a quadrilateral that fits the description. Name the quadrilateral you drew.

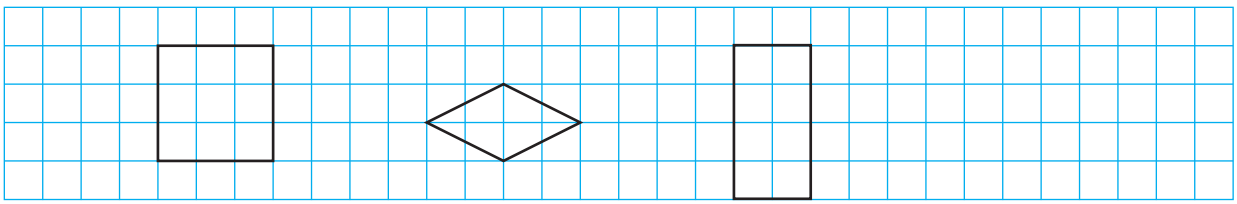
4. exactly 1 pair of opposite sides that are parallel

5. 4 right angles

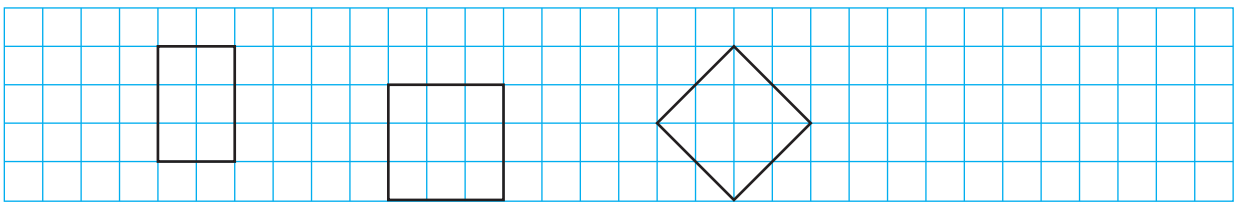
6. 2 pairs of sides of equal length

Draw a quadrilateral that does not belong. Then explain why.

7.

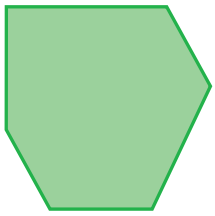


8.



Problem Solving · Applications

9. MTR Jacki drew the shape at the right. She said it is a rectangle because it has 2 pairs of opposite sides that are parallel. Describe her error.



_____

_____

10. Alek drew three quadrilaterals. One quadrilateral has no pairs of parallel sides, one quadrilateral has exactly 1 pair of opposite sides that are parallel, and the last quadrilateral has 2 pairs of opposite sides that are parallel. Draw the three quadrilaterals that Alek could have drawn. Name them.

_____ _____ _____

11. Rie has 4 straws of equal length. Name all the quadrilaterals that Rie can make using these 4 straws.

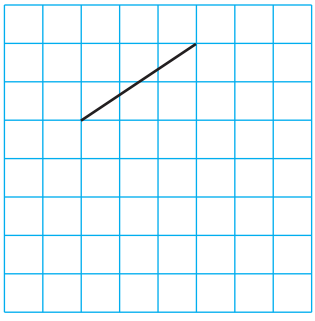
_____

Rie cuts one of the straws in half. She uses the two halves and two of the other straws to make a quadrilateral. Name all the quadrilaterals that Rie can make using these 4 straws.

MATH on the Spot

_____

12. Jordan drew one side of a parallelogram. Draw the other 3 sides to complete Jordan's quadrilateral.



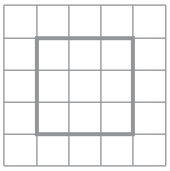
Name _____

Draw Quadrilaterals

Go Online
Interactive Examples

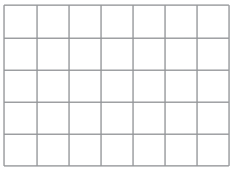
Draw a quadrilateral that fits the description. Name the quadrilateral you drew.

1. has 4 sides of equal length

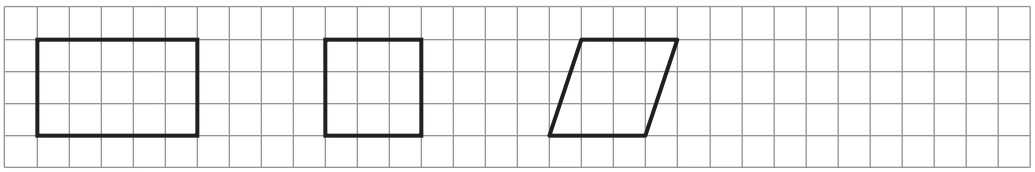


square or rhombus

2. only 1 pair of opposite sides that are parallel



Draw a quadrilateral that does not belong. Then explain why.

3. 

Problem Solving Real World

4. Layla drew a quadrilateral with 4 right angles and 2 pairs of opposite sides that are parallel. What quadrilateral best describes her drawing?

5. WRITE Math Draw a quadrilateral that is NOT a rectangle. Describe your shape, and explain why it is not a rectangle.

Lesson Check

6. Nguyet drew a quadrilateral with 2 pairs of opposite sides that are parallel. What kind of shape might he have drawn?

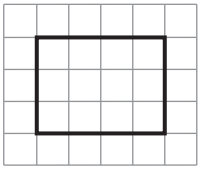
7. Draw a parallelogram. Does it also fit into the category trapezoid? Explain.

Spiral Review

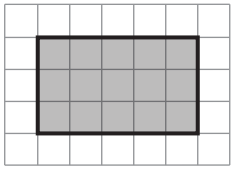
8. What is the name of the quadrilateral that always has 4 right angles and 4 sides of equal length?

9. Mark drew two lines that form a right angle. What word describes the lines Mark drew?

10. Dennis drew the rectangle on grid paper. What is the perimeter of the rectangle Dennis drew?



11. Jill drew the rectangle on grid paper. What is the area of the rectangle Jill drew?



Name _____

Classify Quadrilaterals

I Can draw a diagram to classify plane shapes.

Florida's B.E.S.T.

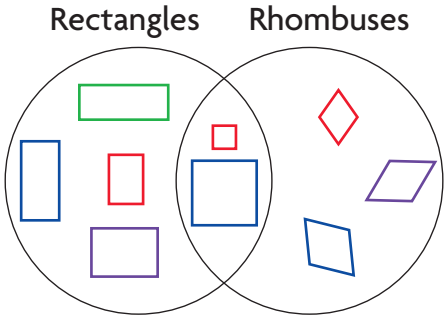
- **Geometric Reasoning** 3.GR.1.2
- **Mathematical Thinking & Reasoning** MTR.1.1, MTR.3.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1

UNLOCK the Problem

Real World

A **Venn diagram** shows how sets of things are related. In the Venn diagram at the right, one circle has shapes that are rectangles. Shapes that are rhombuses are in the other circle. The shapes in the section where the circles overlap are both rectangles and rhombuses.

What type of quadrilateral is in both circles?



Read the Problem

What do I need to find?

_____

_____

What information do I need to use?

the circles labeled _____ and

_____

How will I use the information?

_____

_____

_____

Solve the Problem

What is true about all quadrilaterals?

_____

Which quadrilaterals always have 2 pairs of opposite sides that are parallel?

_____

Which quadrilaterals always have 4 sides of equal length? _____

Which quadrilaterals always have 4 right angles?

_____

The quadrilaterals in the section where the circles overlap always have _____ pairs of opposite sides that are parallel, _____ sides of equal length, and _____ right angles.

So, _____ are in both circles.

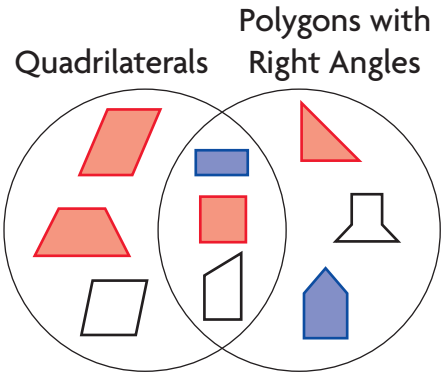
Math Talk

MTR 6.1 Assess reasonableness.

Does a ▱ fit in the Venn diagram? Explain.

Try Another Problem

The Venn diagram at the right shows the shapes Andrea used to make a picture. Where would the shape shown below be placed in the Venn diagram?



Read the Problem	Solve the Problem
What do I need to find?	**Record the steps you can use to solve the problem.** What is true about all quadrilaterals? _____ What is true about polygons with right angles? _____ _____
What information do I need to use?	
How will I use the information?	Is the shape a quadrilateral? _____ Is the shape a polygon with a right angle? _____ Where does the shape go? _____ _____

1. How many shapes do not have right angles?

   _____

2. How many orange shapes have right angles but are not quadrilaterals? _____

3. MTR What is a different way to sort the shapes?

   _____

   _____

Math Talk

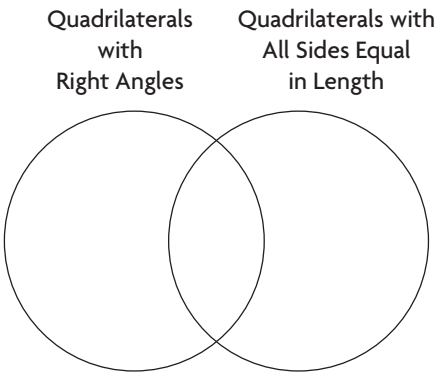
MTR 4.1 Engage in discussions on mathematical thinking.

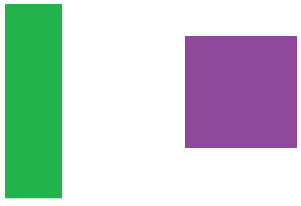
What name can be used to describe all the shapes in the Venn diagram? Explain how you know.

Name _____

Share and Show Math Board

Use the Venn diagram for Problems 1–3.





1. Jordan is sorting shapes into the Venn diagram shown. Describe the orange rhombus.

The rhombus has _____ sides of equal length

and _____ right angles.

Put the orange rhombus in the correct place in the Venn diagram by drawing it again. It is okay if your drawing is smaller than the actual rhombus. Then do the same for the other two shapes. Draw them again inside the diagram, putting them in the correct place.

2. Where would you place a  ?

_____

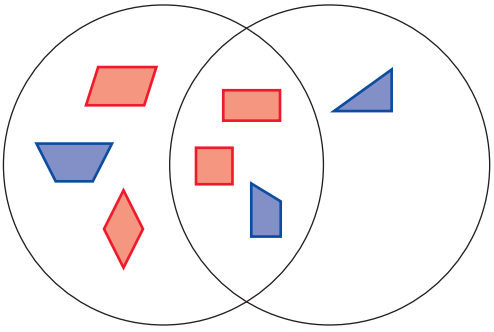
3. Draw three more shapes that belong inside the Venn diagram. Make sure to place them correctly.

_____

4. Eva drew the Venn diagram below. Write labels she could have used for the diagram.

_____ _____

_____ _____



On Your Own

5. Draw a Venn diagram with one circle labeled *Rectangles* and one circle labeled *Rhombuses*. Draw one shape that only belongs inside the *Rectangles* circle and one shape that only belongs inside the *Rhombuses* circle. Then draw a shape in the middle that belongs to both circles. Explain why the third shape belongs to both circles.

6. Explain why a trapezoid is not always a parallelogram.

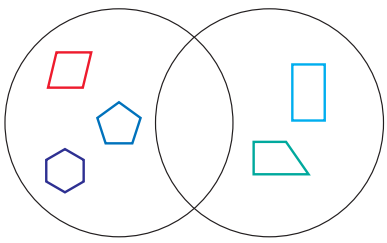
7. Draw and label a Venn diagram to show one way you can sort a parallelogram, a rectangle, a square, a trapezoid, and a rhombus.

MATH on the Spot

8. Sketch where to place these shapes in the Venn diagram.

Polygons with All Sides of Equal Length

Quadrilaterals with Right Angles



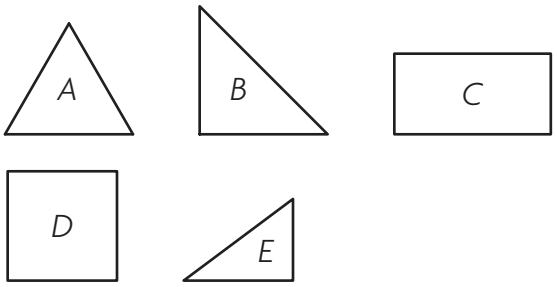
Name

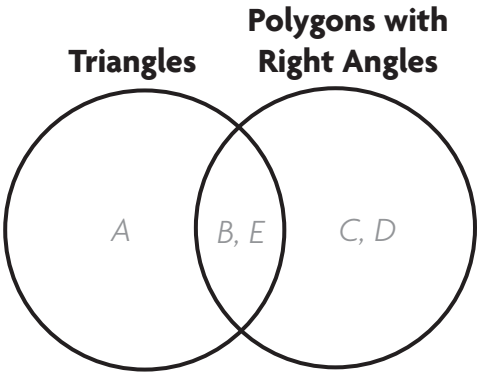
Classify Quadrilaterals

Go Online
Interactive Examples

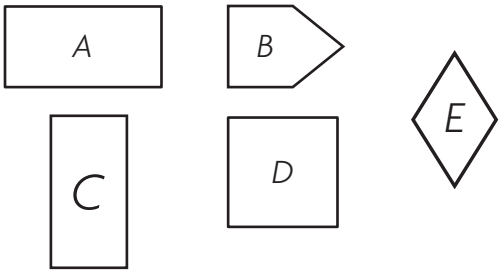
Solve each problem.

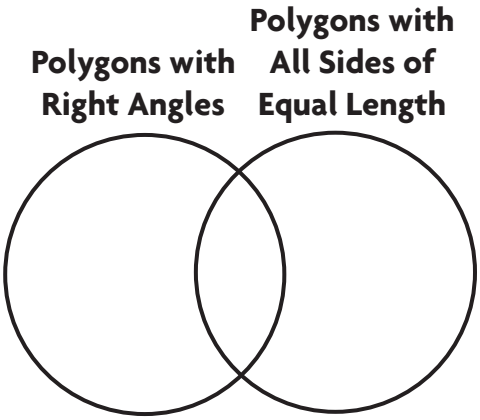
1. Steve drew the shapes below. Write the letter of each shape where it belongs in the Venn diagram.





2. Janice drew the shapes below. Write the letter of each shape where it belongs in the Venn diagram.

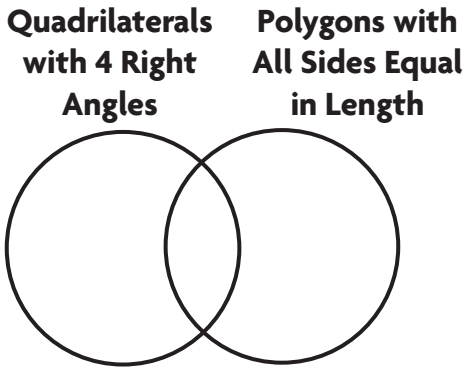




3. WRITE Math Draw a Venn diagram with one circle labeled Quadrilaterals and the other circle labeled Polygons with at Least 1 Right Angle. Draw at least two shapes in each section of the diagram. Explain why you drew the shapes you chose in the overlapping section

Lesson Check

4. What shape could go in the section where the two circles overlap?



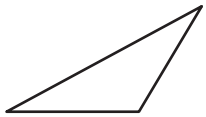
_____

5. Describe a quadrilateral that does NOT go in the circle labeled Polygons with All Sides Equal in Length?

_____

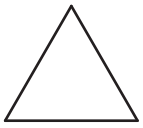
Spiral Review

6. How many angles greater than a right angle does this triangle have?



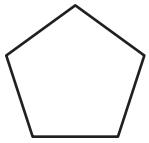
_____

7. How many sides of equal length does this triangle appear to have?



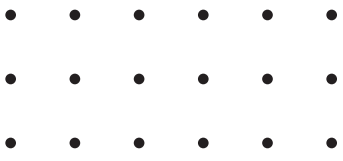
_____

8. Madison drew this shape. How many angles less than a right angle does it have?



_____

9. How many dots are in $\frac{1}{2}$ of this group?



_____

Name _____

Recognize Lines of Symmetry

I Can check if a shape has line symmetry.

Florida's B.E.S.T.

- **Geometric Reasoning** 3.GR.1.3
- **Mathematical Thinking & Reasoning** MTR.1.1, MTR.3.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1

UNLOCK the Problem Real World

One type of symmetry found in geometric shapes is line symmetry. This sign is in the hills above Hollywood, California. Do any of the letters in the Hollywood sign show line symmetry?

A shape has **line symmetry** if it can be folded about a line so that its two parts match exactly. A fold line, or a **line of symmetry**, divides a shape into two parts that are the same size and shape.

Activity 1 Explore line symmetry.

Materials ■ pattern blocks ■ scissors

A Does the letter W have line symmetry?

STEP 1 Use pattern blocks to make the letter W.

STEP 2 Trace the letter.

STEP 3 Cut out the tracing.

STEP 4 Fold the tracing over a vertical line.

Think: The two parts of the folded W match exactly. The fold line is a line of symmetry.

So, the letter W _____ line symmetry.

Math Idea

A vertical line goes up and down. ↕

A horizontal line goes left and right. ↔

A diagonal line goes through vertices of a polygon that are not next to each other. It can go up and down and left and right. ⤢ ⤡

Math Talk

MTR 3.1 Complete tasks with mathematical fluency.

How can you check to see if a shape has line symmetry? Explain.

B **Does the letter L have line symmetry?**

STEP 1

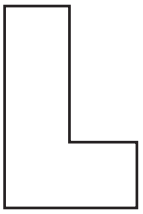
Use pattern blocks or grid paper to make the letter L.

STEP 2

Trace the letter.

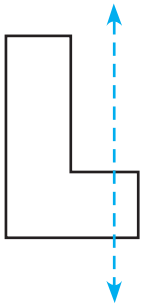
STEP 3

Cut out the tracing.



STEP 4

Fold the tracing over a vertical line.

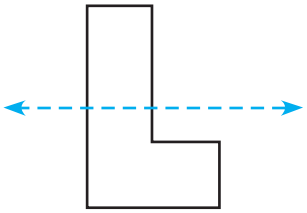


Do the two parts match exactly?

_____

STEP 5

Then open it and fold it horizontally.

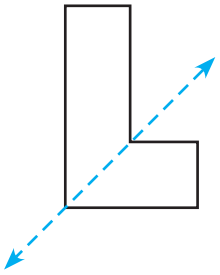


Do the two parts match exactly?

_____

STEP 6

Then open it and fold it diagonally.



Do the two parts match exactly?

_____

So, the letter L _____ line symmetry.

1. Repeat Steps 1–6 for the remaining letters in HOLLYWOOD. Which letters have line symmetry?

_____

2. Do any of the letters have more than one line of symmetry? Explain.

_____

_____

Remember

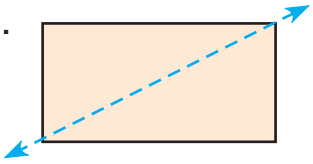
You can fold horizontally, vertically, or diagonally to determine if the parts match exactly.

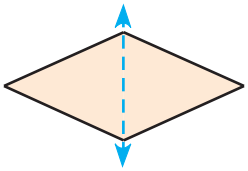
Name _____

Share and Show

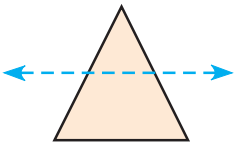
Math Board

Tell whether the parts on each side of the line match. Is the line a line of symmetry? Write *yes* or *no*.

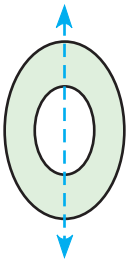
1. 

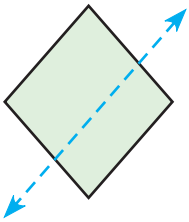
2. 

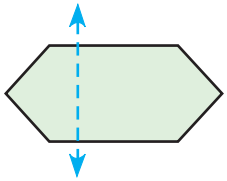
3. 

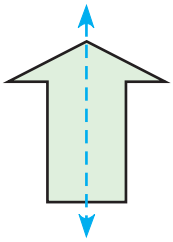
4. 

Tell if the blue line appears to be a line of symmetry. Write *yes* or *no*. If the answer is *yes*, describe the line of symmetry as *vertical*, *horizontal*, or *diagonal*.

5. 

6. 

7. 

8. 

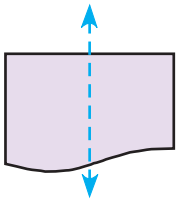
Math Talk

MTR 3.1 Complete tasks with mathematical fluency.

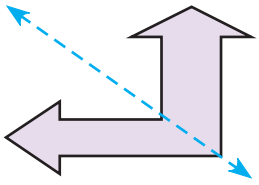
How can you decide if a line is vertical, horizontal, or diagonal?

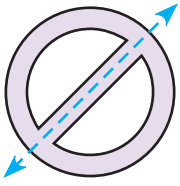
On Your Own

Tell if the blue line appears to be a line of symmetry. Write *yes* or *no*. If the answer is *yes*, describe the line of symmetry as *vertical*, *horizontal*, or *diagonal*.

9. 

10. 

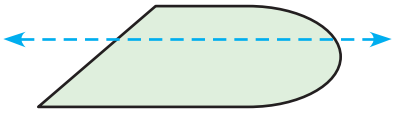
11. 

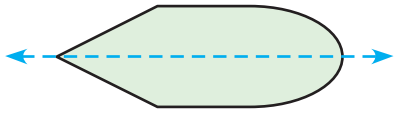
12. 

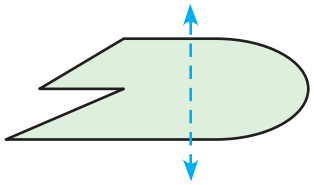
13. Describe the lines of symmetry in the letter I.

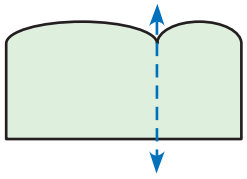
Problem Solving · Applications

14. Which shape has a correctly drawn line of symmetry?









MATH on the Spot

a. What do you need to find? _____

_____

b. How can you tell if the line of symmetry is correct?

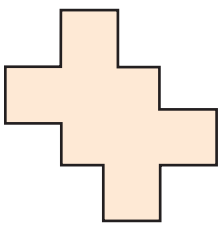
_____

c. Describe how you can solve the problem.

_____

d. Circle the correct shape above.

15. MTR Ms. van Rohr designed a website logo with the shape shown. Draw a line of symmetry in the figure.



16. Evie's birthday is on May 18. Since May is the 5th month, Evie wrote the date as shown.

5/18

Evie says all the numbers she wrote have line symmetry. Is she correct? Explain.

_____

_____

_____

_____

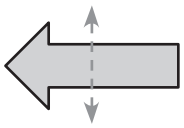
Name _____

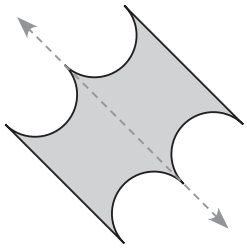
Recognize Lines of Symmetry

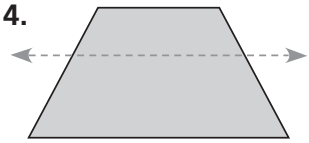
Go Online
Interactive Examples

Tell if the dashed line appears to be a line of symmetry. Write *yes* or *no*. If you write *yes*, describe the line of symmetry as *vertical*, *horizontal*, or *diagonal*.

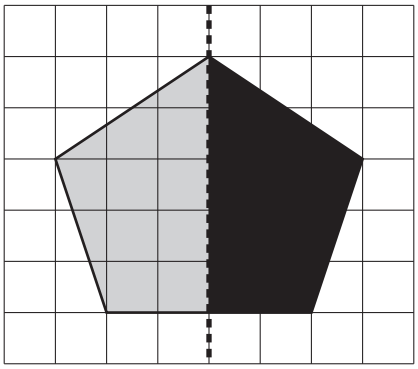
1. 
yes, vertical

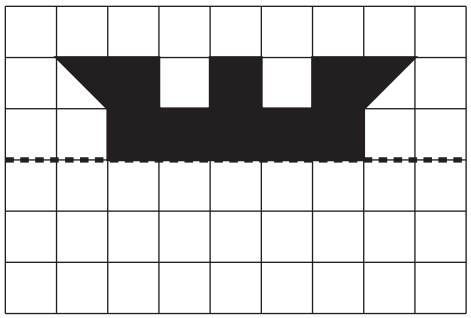
2. 
_____

3. 
_____

4. 
_____

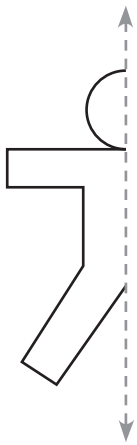
The diagram shows half a figure and its line of symmetry. Draw the rest of the figure on the other side of the line.

5. 

6. 

Problem Solving Real World

7. Kara uses the pattern at the right to make paper dolls. The dashed line represents a line of symmetry. A complete doll includes the reflection of the pattern over the line of symmetry. Complete the design to show what one of Kara's paper dolls looks like.

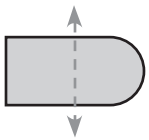


8. WRITE Math Write a word that has line symmetry, like the word OHIO. Draw the line(s) of symmetry for each letter.

Lesson Check

9. What word best describes the line of symmetry in the letter D?

10. Does the shape below show a correct line of symmetry? Explain.



Spiral Review

11. The class has 56 unit cubes in a bag. Johnnie divides the unit cubes equally among 8 groups. How many unit cubes will each group get?

12. There are 5,280 feet in one mile. What is 5,280 rounded to the nearest ten? What is 5,280 rounded to the nearest hundred?

13. Sue has 4 pieces of wood. The lengths of her pieces of wood are $\frac{1}{3}$ foot, $\frac{1}{5}$ foot, $\frac{1}{10}$ foot, and $\frac{1}{4}$ foot. Which piece of wood is the shortest?

14. Sylvester has 5 times as many miniature cars as Alice. Sylvester has 35 miniature cars. How many miniature cars does Alice have?

Name _____

Identify and Draw Lines of Symmetry

I Can identify and draw lines of symmetry.

Florida's B.E.S.T.
- **Geometric Reasoning** 3.GR.1.3
- **Mathematical Thinking & Reasoning** MTR.1.1, MTR.2.1, MTR.4.1, MTR.6.1

UNLOCK the Problem

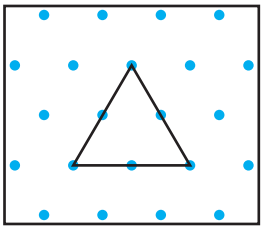
How many lines of symmetry does each polygon have?

Activity 1 Identify lines of symmetry.

Materials ■ isometric and square dot paper ■ straightedge

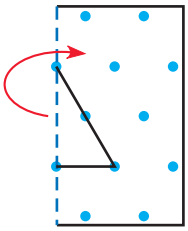
STEP 1

Draw a triangle like the one shown, so all sides have equal length.



STEP 2

Fold the triangle in different ways to test for line symmetry. Draw along the fold lines that are lines of symmetry.

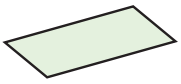
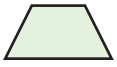


- Is there a line of symmetry if you fold the paper horizontally?

_____

STEP 3

Repeat the steps for each polygon shown. Complete the table.

Polygon	 Triangle	 Square	 Parallelogram	 Rhombus	 Trapezoid	 Hexagon
Number of Sides	3					
Number of Lines of Symmetry	3					

- In a regular polygon, all sides are of equal length and all angles are equal. What do you notice about the number of lines of symmetry in regular polygons?

_____

_____

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

How many lines of symmetry does a circle have? Explain.

Activity 2 Make designs that have line symmetry.

Materials ■ pattern blocks

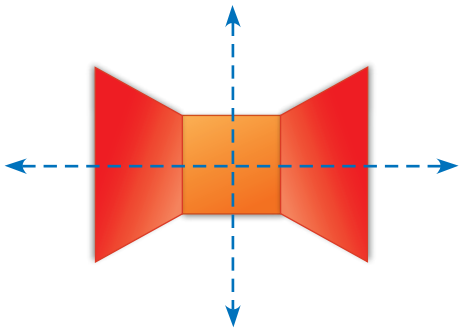
Make a design by using more than one pattern block.

Record your design. Draw the line or lines of symmetry.

Common Error

To avoid errors, you may use a mirror to check for line symmetry.

Make a design with 2 lines of symmetry.



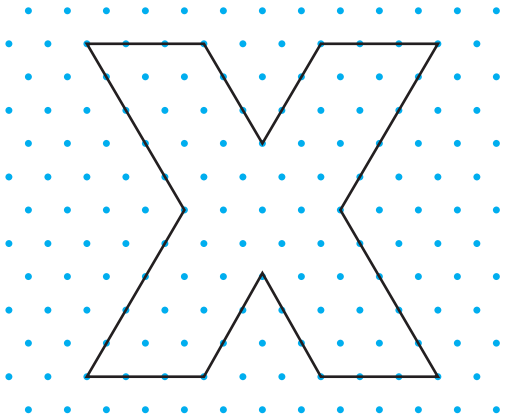
Make a design with 1 line of symmetry.

Make a design with more than 2 lines of symmetry.

Make a design with zero lines of symmetry.

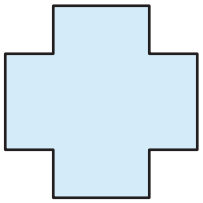
Share and Show Math Board

1. The shape at the right has line symmetry. Draw the 2 lines of symmetry.



Name _____

Tell whether the shape appears to have zero lines, 1 line, or more than 1 line of symmetry. Write *zero*, *1*, or *more than 1*.

2. 

3. 

4. 

5. 

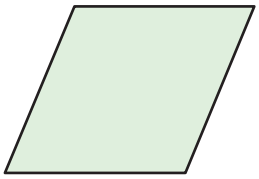
Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

Explain how you can find lines of symmetry for a shape.

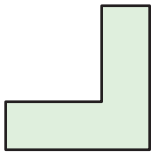
On Your Own

Tell whether the shape appears to have zero lines, 1 line, or more than 1 line of symmetry. Write *zero*, *1*, or *more than 1*.

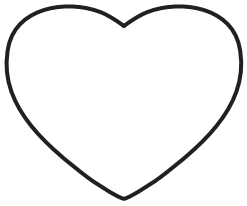
6. 

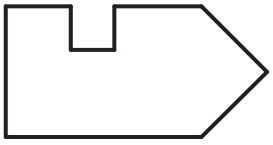
7. 

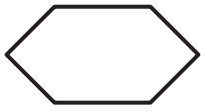
8. 

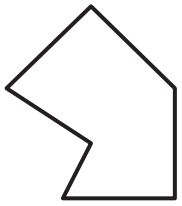
9. 

Practice: Copy and Solve **Does the design have line symmetry? Write *yes* or *no*. If your answer is *yes*, draw all lines of symmetry.**

10. 

11. 

12. 

13. 

14. Draw a figure that has 5 sides and exactly 1 line of symmetry.

Problem Solving · Applications

Use the chart for problems 15–17.

A	H	S
B	I	T
C	J	U
D	L	V
E	N	W

15. Which letters appear to have only 1 line of symmetry? Draw the line of symmetry.

_____

16. Which letters appear to have zero lines of symmetry?

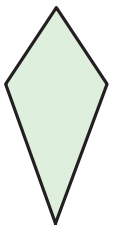
_____

17. The letter C has horizontal symmetry. The letter A has vertical symmetry. Which letters appear to have both horizontal and vertical symmetry? Draw the lines of symmetry.

_____

MATH on the Spot

18. MTR Jeff says that the shape has 2 lines of symmetry.



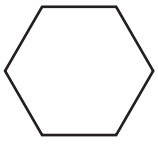
Does his statement make sense? Explain.

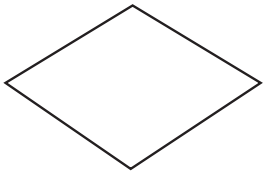
_____

_____

_____

19. Match each figure with the correct number of lines of symmetry it has.





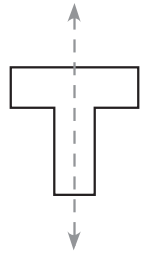
•	•	•	•
•	•	•	•
0 lines of symmetry	1 line of symmetry	2 lines of symmetry	More than 2 lines of symmetry

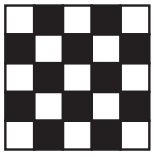
Name _____

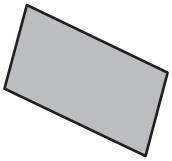
Identify and Draw Lines of Symmetry

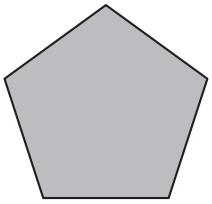
Go Online
Interactive Examples

Tell whether the shape appears to have zero lines, 1 line, or more than 1 line of symmetry. Write *zero, 1,* or *more than 1*.

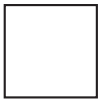
1. 
1

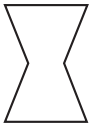
2. 
_____

3. 
_____

4. 
_____

Does the design have line symmetry? Write *yes* or *no*. If your answer is yes, draw all lines of symmetry.

5. 
_____

6. 
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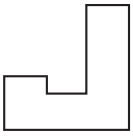
7. 
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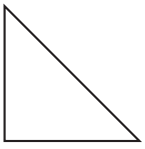
8. 
_____

Draw a shape for the statement. Draw the line or lines of symmetry.

9. zero lines of symmetry

10. 1 line of symmetry

11. 2 lines of symmetry

Problem Solving Real World

Use the chart for problem 12.

0	2	3	4
5	6	8	9

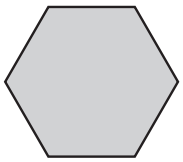
12. Which number or numbers appear to have 2 lines of symmetry? Draw the lines of symmetry.

_____

13. WRITE Math Draw a picture of a figure that has more than 3 lines of symmetry. Draw the lines of symmetry.

Lesson Check

14. How many lines of symmetry does this shape appear to have? Draw the lines of symmetry.



15. Draw a shape that has exactly 1 line of symmetry.

Spiral Review

16. When school started, the temperature was 77°F. When school ended, the temperature was 94°F. What was the change in temperature?

17. What is the area of a rectangle with length 12 inches and width 8 inches?

18. Lynne used $\frac{2}{3}$ cup of flour and $\frac{2}{8}$ cup of sugar in a recipe. Did she use more flour or sugar? Explain.

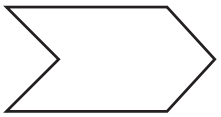
19. Kevin draws a figure that has four sides. All sides have the same length. His figure has no right angles. What figure does Kevin draw?

Name _____

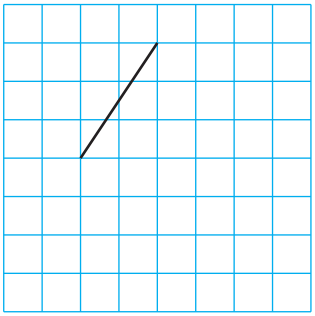
Chapter 26

Chapter Review

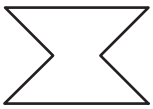
1. Claudia drew the shape shown. Draw a line of symmetry on Claudia's shape.

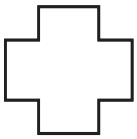


2. Umberto drew one side of a rhombus with no right angles. Draw the other 3 sides to complete Umberto's shape.



3. Match each shape with the correct number of lines of symmetry it has.

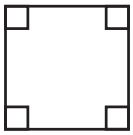




0 lines of symmetry	1 line of symmetry	2 lines of symmetry	More than 2 lines of symmetry

4. Jeremy drew shape 1 and Louisa drew shape 2.

Shape 1



Shape 2

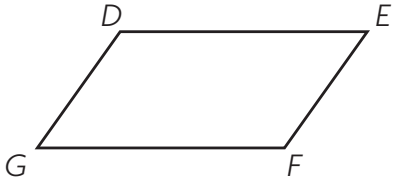
Part A

Jeremy says both shapes appear to be rectangles. Do you agree with Jeremy? Support your answer.

Part B

Louisa says both shapes appear to be rhombuses.
Do you agree with Louisa? Support your answer.

5. Mike drew a shape with opposite sides parallel. Write the pairs of parallel sides. What shape is it?



6. Circle the letter that does not have line symmetry.

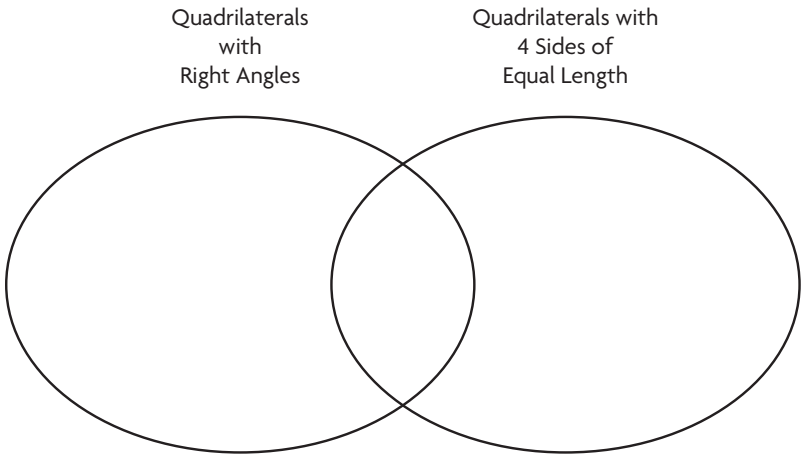
DOTS

Name _____

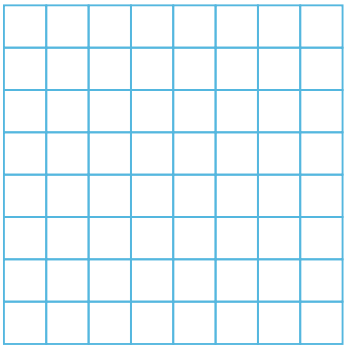
7. How can you classify this shape? Mark all that apply.

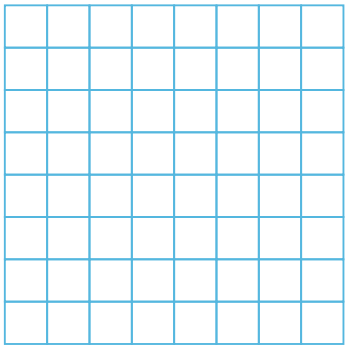
rectangle Ⓐ rhombus Ⓑ quadrilateral Ⓒ square Ⓓ

8. Draw a rectangle, a rhombus, and a square in the Venn diagram to show the relationship among the three shapes.

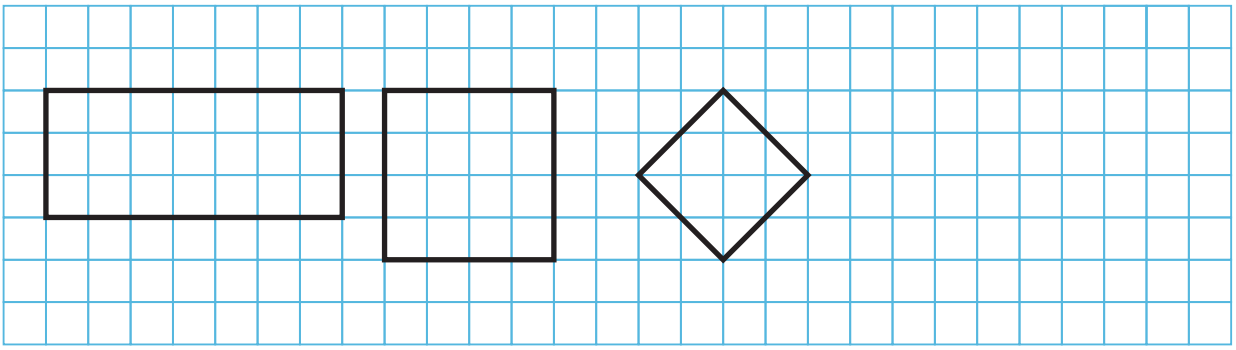


9. Draw two different quadrilaterals that have 4 sides of equal length.





10. 10a. Draw a quadrilateral that does not belong.



10b. Explain why your quadrilateral does not belong.

_____

_____

11. Teresa drew a quadrilateral that has 2 pairs of sides with equal lengths and 4 right angles. What quadrilateral did she draw? Draw it and name it.

_____

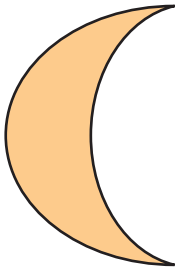
12. Draw a shape that has no line of symmetry.

Name _____

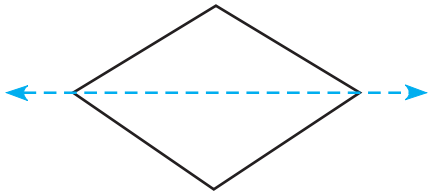
13. Draw all lines of symmetry for each shape. If there is no line of symmetry, write *none*.

12a.

12b.



14. Tell if the blue line appears to be a line of symmetry. Write *yes* or *no*. If the answer is *yes*, describe the line of symmetry as *vertical*, *horizontal*, or *diagonal*.



_____

15. Draw a Venn diagram with two circles. Label one circle *Polygons with Right Angles* and the other circle *Quadrilaterals with Parallel Sides*. Draw 1 shape inside the diagram that belongs only to the first category. Draw 1 shape inside the diagram that belongs only to the second category. Draw 1 shape inside the diagram that belongs to both categories. Be sure to place each shape in the correct place.

16. Classify the shape. Mark all that apply.

- ○ quadrilateral
- ○ rectangle
- ○ trapezoid
- ○ rhombus
- ○ parallelogram
- ○ square

17. Lily designed a deck in her backyard that looks like a quadrilateral and has only 1 pair of parallel sides. How can you classify the shape?

The quadrilateral is a _____.

18. Ava drew a quadrilateral with 2 pairs of opposite sides that are parallel. The shape has at least 2 right angles. Draw a shape that Ava could have drawn.

19. Draw a quadrilateral that has more than one line of symmetry. Then draw dotted lines to show the line of symmetry.