Brandon Valley School District District Learning Plan March 16-19, 2020

Grade 5 Math



Brandon Valley School District Distance Learning Plan

LESSON/UNIT: Chapter 12 Geometry SUBJECT/GRADE: Math/5th DATES: March 16 - 19, 2020

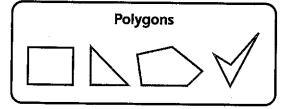
What do students need to do?	Monday (3/16) : Review math textbook pages 903-904. Work independently on pages 905-906 for practice. Complete homework pages 907-908, 1-10 to be assessed.			
	Tuesday (3/17): Review math textbook pages 915-916. Work independently on pages 917-918. Complete homework pages 919-920, 1-9 to be assessed.			
	Wednesday (3/18): Review math textbook pages 923-924. Work independently on pages 925-926. Complete homework pages 927-928, to be assessed.			
	Thursday (3/19): Review math textbook pages 929-930. Work independently on page 931-932 for practice. Complete homework pages 933-934, 1-11 to be assessed.			
What do students need to bring back when school resumes?	Math textbook with completed homework pages for chapter 12. Pages 907-908, 919-920, 927-928, 933-934.			
What standards do the lessons cover?	Classify two-dimensional figures into categories based on their properties. 5.G.3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles. 5.G.4. Classify two-dimensional figures in a hierarchy based on properties. For example, all rectangles are parallelograms, because they are all quadrilaterals with two pairs of opposite, parallel, equal-length sides.			
What materials do	Need -Math Textbook			
students need? What	Extra -You Tube Videos			
extra resources can students use?	Day 1: https://www.youtube.com/watch?v=rQ9m3373glg			
stadents ase:	Day 2: https://www.youtube.com/watch?v=H62faKsyemc			
	Day 3 and 4: https://www.youtube.com/watch?v=3i2yp-II_V4			
What can students do if they finish early?	1 State testing practice site- https://login10.cloud1.tds.airast.org/student/V388/Pages/LoginShell.aspx?c= SouthDakota_PT 2. ALEKS https://www.aleks.com/ 3. Practice your math facts- https://www.factmonster.com/math/flashcards			
Who can we contact if	Blue Team: Mr. Mashlan- <u>Justin.Mashlan@k12.sd.us</u>			
we have questions?	Red Team: Mr. Carroll- <u>Scott.Carroll@k12.sd.us</u>			
	White Team: Mr. Peters- Jon.Peters@k12.sd.us			
	Silver Tean: Mr. Wiese- <u>Alex.Wiese@k12.sd.us</u>			

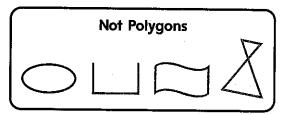
Brandon Valley School District

Lesconi Polygon

ESSENTIAL QUESTION
How does geometry help
me solve problems in
everyday life?

A **polygon** is a closed figure made up of line segments that do not cross each other.







Math in My World



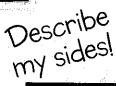
Example 1

The building shown is the Pentagon in Washington, D.C. Describe the sides of the figure formed by the red outline. Does the red outline form a polygon?

The figure has ____ sides.

Do the sides ever cross each other? The figure is a polygon.

A **regular polygon** is a polygon with congruent sides and congruent angles. **Congruent sides** are equal in length. **Congruent angles** have the same degree measure.





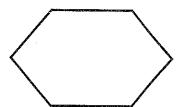
Example 2

Determine if the polygon appears to be regular or not regular.

The top and bottom sides appear that the other sides.

Are all six sides of the polygon congruent?

It is regular.



Polygons are a subcategory of two-dimensional figures. A *subcategory* is a subdivision that has common characteristics within a larger category.

Example 3



Complete the table below.

Polygon	Regular	Not Regular	Number of Sides	Draw another polygon that is not regular.
Triangle				
Guadrilateral				
Pentagon				
Hexagon				
Octagon				

Guided Practice

1. Name the polygon. Determine if it appears to be regular or not regular.



The polygon has _____ sides.

The sides appear to be _____.

It is a



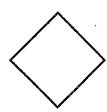
Is a circle a polygon? Explain.

) [.a.z.: . . .

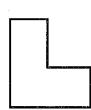
Independent Practice

Processes | Identify Structure Name each polygon. Determine if it appears to be regular or not regular.

2.



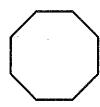
3.



4.



5.



Draw each polygon.

6. triangle; not regular

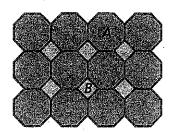
7. pentagon; not regular

- 8. quadrilateral; not regular
- 9. triangle; regular



Problem Solving

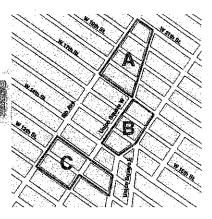
10. What polygons make up the design?



11. Describe polygon B as regular or not regular.

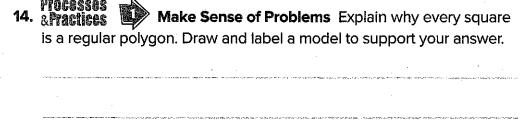
For Exercises 12 and 13, use the map shown at the right.

12. Circle the polygon that is a quadrilateral.



. Brain Builders

13. Use the city streets on the map to create a regular polygon.



15. Building on the Essential Question How can polygons be considered a subcategory of two-dimensional figures? Name another subcategory of two-dimensional figures.

Homework

Lesson 1

Polygons

Homework Helper



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Name the polygon used to form the greeting card shown. Does the red outline appear to be a regular polygon?

The polygon has four sides.

The top and bottom sides appear to be slightly longer than the other sides.

It is a quadrilateral.

It is not regular.



Practice

Name each polygon. Determine if it appears to be regular or not regular.

1



2.



Vocabulary Check



Fill in each blank with the correct word(s) to complete each sentence.

- **3.** A polygon is a _____ figure made up of line segments that do not cross each other.
- 4. A regular polygon is a polygon with _____ sides and

Problem Solving

For Exercises 5–7, use the tangram pieces shown at the right.

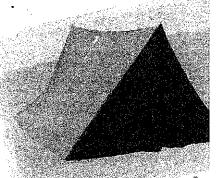
5. Which of the polygon(s) appear to be regular?



- 6. What polygons are represented in the tangrams?
- **7.** Congruent figures have the same size and shape. Which polygons appear to be congruent?



8. Name the polygons used to form the front and sides of the tent shown. Determine if they appear to be *regular* or *not regular*.



9. & Practices Justify Conclusions Hector states that the figure to the right is a polygon that is not regular. Do you agree with Hector? Explain.



10. Test Practice Which of the following figures is a polygon?









anoreia Classify Trangles

How does geometry help me solve problems in everyday life?

You can classify triangles using one or more attributes. An attribute is a characteristic of a figure, like side measures and angle measures.



Math in My World





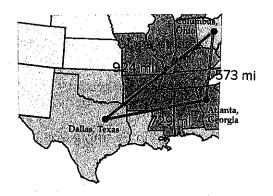
Example 1

The Hammond family traveled from Columbus, Ohio, to Dallas, Texas, and then to Atlanta, Georgia, before returning home. The distance of each flight is shown on the map. Find the number of congruent sides.

The lengths of the sides of the triangle are

924 miles, 573 miles, and

How many sides of the triangle are congruent?



Key Concept Classify Triangles by Sides

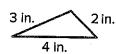
Isosceles Triangle

Equilateral Triangle

Scalene Triangle



3 in.



at least two sides congruent

all sides congruent

no sides congruent

So, the triangle formed on the map in Example 1 is a triangle.

Example 2



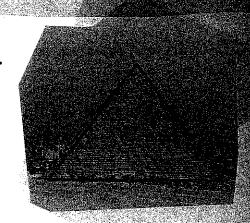


Triangles form the sides of the Khafre Pyramid in Egypt. Determine the number of acute, obtuse, or right angles in the triangle.

How many angles of the triangle are acute?

How many angles of the triangle are obtuse?

How many angles of the triangle are right?



Key Concept Classify Triangles by Angles

Acute Triangle



Obtuse Triangle







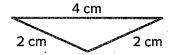
3 acute angles

1 right angle, 2 acute angles 1 obtuse angle, 2 acute angles

So, the triangle in Example 2 is a(n)

Guided Practice

1. Classify the triangle based on its sides.



How many sides of the triangle are congruent?

The triangle is a(n)



Describe an isosceles right triangle.

2. Classify the triangle based on its angles.

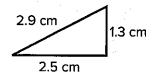


The triangle is a(n)

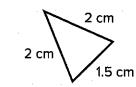
Independent Practice

Determine the number of congruent sides for each triangle. Then classify the triangle based on its sides.

3.

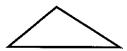


4.

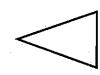


Classify each triangle based on its angles.

5.



6.



7.



8.



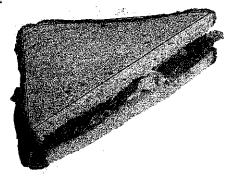
Draw each triangle.

9. equilateral triangle

10. right triangle

Problem Solving

- **11.** Half of a rectangular sandwich looks like a triangle. Classify it based on its angles.
- 12. & Practices ldentify Structure Measure the sides of the sandwich. Classify the triangle based on its sides.



Brain Builders

- Processes

 Nation Draw a Conclusion Emma, Gabriel, Jorge, and Makayla each drew a different triangle. Use the clues below to describe each person's triangle as isosceles, equilateral, or scalene and also as acute, right, or obtuse.
 - Gabriel and Jorge each drew a 90° angle in their triangles.
 - Gabriel's triangle does not have any congruent sides.
 - One angle in Emma's triangle measures greater than 90°.
 - Each side of Makayla's triangle and two sides of Emma's and Jorge's triangles are four centimeters long.

	Building on the Essential Question How do I classify triangles
14.	Building on the Essential Question How do I classify triangles
	using their attributes? Include a sketch of each type of triangle.

Homework

Lesson 3

Classify Triangles

Homework Helper

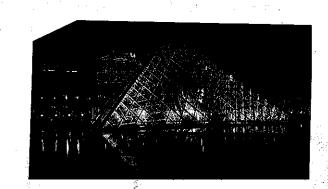


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There is a large pyramid standing in front of the Louvre museum in Paris, France. The sides of the pyramid are shaped like triangles. Classify the red triangle based on its angles.

There are three acute angles.

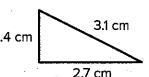
So, the triangle formed by the side of the pyramid is an acute triangle.



Practice

1. Determine the number of congruent sides. Then classify the triangle based on its sides.

How many sides of the triangle are congruent?



The triangle is a _____

Vocabulary Check



Fill in each blank with the correct term(s) or number(s) to complete each sentence.

- 2. An equilateral triangle is a triangle with _____ congruent sides.
- 3. An acute triangle is a triangle with _____ angles each

less than _____.

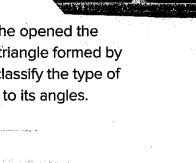
4. An obtuse triangle is a triangle with one angle that is greater

than _____.

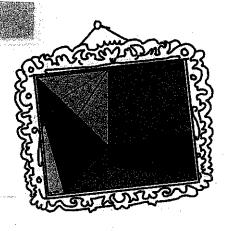
5. Look at the triangle on the top of the White House in the photo. Describe the sides and angles of the triangle.



6. Serena has an art easel with sides of equal length. She opened the easel and placed it on her desk. Classify the type of triangle formed by the easel and the desk according to its sides. Next, classify the type of triangle formed by the easel and the desk according to its angles.



7. & Tactices | Identify Structure The image shown at the right contains many triangles. Describe the different types of triangles found in the image. Explain how you classified each type.



Processes 8. &Practices Justify Conclusions A triangle has two sides that are perpendicular. Could the triangle be isosceles, equilateral, or scalene? Explain. Include a drawing to support your answer.

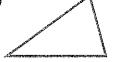


9. Test Practice Which of the following figures is an obtuse triangle?





➂



0







A quadrilateral is a polygon with four sides and four angles.

How does geometry help me solve problems in everyday life?

Measure It



Measure the sides and angles of each figure to determine if any are congruent. Then determine if any sides are parallel. Complete the table.

Figure I

Figure 2

Figure 3

Figure 4

Attribute	Figure(s)
Opposite sides are congruent.	
Opposite sides are parallel.	
Opposite angles are congruent.	

Each figure has

sides and angles.

Talk About It

- 1. What common attributes do all of the figures have?
- 2. Does Figure 3 have all the attributes of Figure 2? Explain.

Trylt

Measure the sides and angles of each figure to determine if any are congruent. Then determine if any sides are parallel. Complete the table.

Figure 1 Figure 2 Figure 3 Figure 4

Attribute	Figure(s)
Opposite sides are congruent.	
Opposite sides are parallel.	
Opposite angles are congruent.	

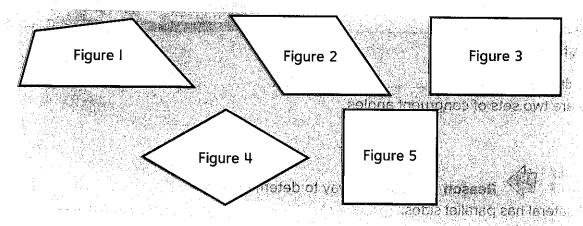
Talk About It

- 3. Does Figure 3 have all the attributes of Figure 2? Explain.
- **4.** What are some additional attributes that Figure 3 has that Figure 2 doesn't have?
- 5. & Practices Make Sense of Problems Explain how Figure 2 is a special kind of polygon.

6. Which figure does not have any of the attributes listed in the table?

Practice It

Measure the sides and angles of each figure to determine if any are congruent or parallel. Then answer Exercises 7-13.



7. Complete the attributes of Figure 1.

Opposite sides are and

Opposite angles are

The figure has sides and angles.

8. Complete the attributes of Figure 2.

Opposite sides are and

Opposite angles are

The figure has _____ sides and ____ angles.

- 9. Which figures have all the attributes of Figure 1?
- **10.** Which figures have all the attributes of Figure 2?
- 11. Which figures have all the attributes of Figure 3?
- **12.** Which figures have four right angles?
- **13.** Which figures have four equal sides?

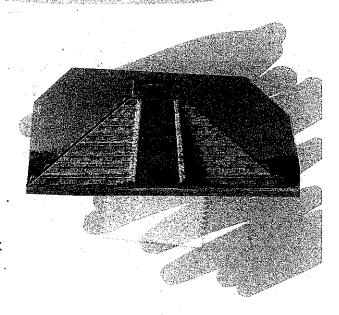
Apply It

14. Complete the attributes of the red quadrilateral outlining one side of the Chichen Itza pyramid in Mexico.

There is one pair of opposite sides.

There is a different pair of opposite sides.

Opposite angles are not _____, but there are two sets of congruent angles.



15. & Taclices Reason Explain one way to determine if a quadrilateral has parallel sides.

16. & Tactions Which One Doesn't Belong? Circle the quadrilateral that does not belong with the other three. Explain your reasoning.









Mh

Write About It

17. How are all quadrilaterals alike and how can they be different?

and the state of t

Homework

Lesson 4

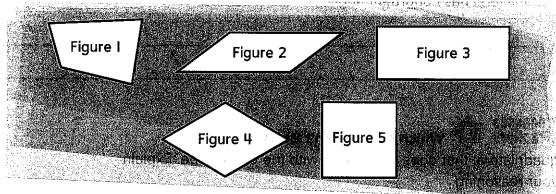
Hands On: Sides and Angles of **Quadrilaterals**

Homework Helper



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Measure the sides and angles of each figure to determine if any are congruent. Then determine if any sides are parallel. Complete the table.



Attribute	Figure(s)
Opposite sides are congruent.	2, 3, 4, 5
Opposite sides are parallel.	2, 3, 4, 5
Opposite angles are congruent.	2, 3, 4, 5

Each figure has 4 sides and 4 angles.

Practice

Refer to the figures above in the Homework Helper to solve Exercises 1-3.

1. Complete the attributes of Figure 2.

Opposite sides are _____ and ____

Opposite angles are _____.

The figure has _____ sides and ____ angles.

- 2. Which figures have all the attributes of Figure 2?
- **3.** Which figures have four right angles?

Propiem Solving	
The state of Nevada is in the shape of a quadrilateral. Complete the attributes of the outline of the state of Nevada.	
There is one set of opposite sides.	
Opposite sides are not	
Opposite angles are not, but there are two right angles.	
Reason Explain one way to determine if a quadrilateral has congruent angles.	
Which One Doesn't Belong? Circle the quadrilateral that does not belong with the other three. Explain your reasoning.	
	e de envirais militares en encommunicación de la consequencia della co
- A CONTROL OF THE PROPERTY OF	од и менент в от том выможения было в саме је за чез темент от оттигнити и том от о
	The state of Nevada is in the shape of a quadrilateral. Complete the attributes of the outline of the state of Nevada. There is one set of

Vocabulary Check



Fill in each blank with the correct term or number to complete the sentence.

7. A quadrilateral is a polygon with _____ sides and ____ angles.

How does geometry help me solve problems in everyday life?

You can classify quadrilaterals using one or more attributes like congruent sides, parallel sides, and right angles.

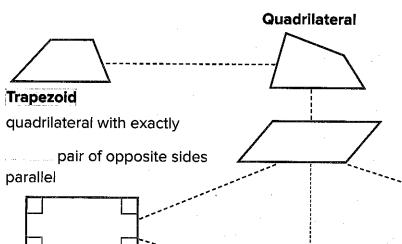


Math in My World



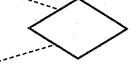
Example 1

Trina cut out polygon mats to use for her travel photos. Use the figures below to determine the missing attribute(s) of each type of quadrilateral.



Parallelogram

quadrilateral with opposite sides congruent and



Rectangle

parallelogram with

right angles

Square

parallelogram with

.... sides congruent

and ____ right angles

A square has all the attributes of a rectangle and a

Rhombus

parallelogram with

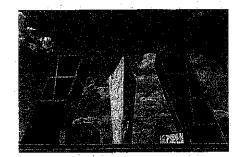
sides congruent

Example 2



One side of the Realia building in Madrid, Spain, is shown at the right. Describe the attributes of the quadrilateral. Then classify it based on its attributes.

The quadrilateral has opposite sides	* 1.20
and	
So it is a	



Mia

Guided Practice

1. Describe the attributes of the quadrilateral below. Then classify the quadrilateral based on its attributes.



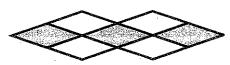
The opposite sides of the quadrilateral are

and agreement response to the contract of the

There are ____ right angles.

So, the quadrilateral is a

2. The design below is made up of a repeating quadrilateral. Describe the attributes of the quadrilateral. Then classify the quadrilateral based on its attributes.



The quadrilateral has _____ congruent sides.

Opposite sides are _____.

So, the quadrilateral is a _____.

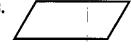
Tell why a square is a special kind of rectangle.

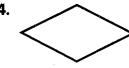
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Independent Practice

Describe the attributes of each quadrilateral. Then classify the quadrilateral.

3.





5. Circle the quadrilateral(s) that have all the attributes of a parallelogram.

rectangle |

rhombus

square

trapezoid

6. Circle the quadrilateral(s) that have all the attributes of a rhombus.

rectangle |

square

trapezoid

parallelogram

State whether the following statements are true or false. If false, explain why.

- All parallelograms have opposite sides congruent and parallel. Since rectangles are parallelograms, all rectangles have opposite sides congruent and parallel.
- 8. All squares have four congruent sides. Since rectangles are squares, all rectangles have four congruent sides.



Problem Solving

9. & Practices Identify Structure Many aircraft display the shape of the American flag as shown below to indicate motion. Classify the quadrilateral.



10. Adena used a quadrilateral in her art design. The quadrilateral has no sides congruent and only one pair of opposite sides parallel. Classify the shape of the quadrilateral she used.

Brain Builders

- 11. Traci planted two tomato gardens. One garden is rectangular. The shape of the second garden has all the attributes of the rectangular garden. In addition, it has four congruent sides. Classify the shape of the second tomato garden. Explain.
- 12. & Model Math Draw a parallelogram that is neither a square, rhombus, nor rectangle. Explain how you determined your parallelogram.

13. Building on the Essential Question How do I classify quadrilaterals using their attributes? Include a real-world example.

Homework



Classify Quadrilaterals

Homework Helper



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Describe the attributes of the quadrilateral. Then classify it based on its attributes.

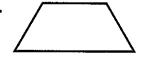
The quadrilateral has all sides congruent and opposite sides parallel.

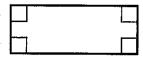
It has four right angles.

So, the quadrilateral is a square.

Practice

Describe the attributes of each quadrilateral. Then classify the quadrilateral.





3. Circle the quadrilateral(s) that have all the attributes of a rectangle.

trapezoid

parallelogram

square

rhombus

			t .				
Name	-11	46-	quadrilaterals		h +h		
Name	all	THE	auaariiaterais	inat	nave the	niven	attribilites
			december		11010 1110	direil	MERIDALE.

- 4. opposite sides parallel
- 5. four right angles
- 6. exactly one pair of opposite sides parallel

Brain Builders

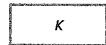
- 7. Is it possible to draw a quadrilateral with 4 congruent sides that is *not* a parallelogram? Explain.
- 8. & Practices Model Math Write a real-world problem that involves classifying a quadrilateral. Then solve the problem and explain the solution.

Vocabulary Check



Fill in each blank with the correct term or number to complete each sentence.

- 9. A rectangle is a parallelogram with _____ right angles.
- 10. A trapezoid is a quadrilateral with exactly pair of parallel sides.
- 11. Test Practice Which statement about the figures shown below is true?









- $igatebox{$A$}$ Figures K and N are rectangles.
- \bigcirc Figures K and N are parallelograms.
- f B Figures L and N are quadrilaterals.
- \bigcirc Figures M and N are parallelograms.

Check My Progress



Vocabulary Check



State whether each sentence is true or false.

- 1. A triangle with no congruent sides is a scalene triangle.
- 2. A polygon that has 4 sides and 4 angles is a pentagon.
- 3. Sides or angles with the same measure are congruent.
- **4.** A **right triangle** is a triangle with two right angles.

Concept Check

Name each polygon. Determine if it appears to be *regular* or *not regular*.

5.

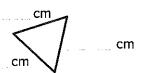


6.

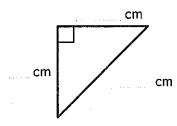


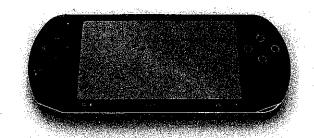
Measure the sides of each triangle to the nearest tenth of a centimeter. Then describe the number of congruent sides.

7.



8.





- 10. Steve has three lengths of fence. He connects them to make a triangular pen for his dog. If the lengths are 5 meters, 6 meters, and 10 meters, what type of triangle is formed by the dog pen?
- **11.** Name the polygon shown by the banner at the right. Determine if it appears to be *regular* or *not regular*.



Brain Builders

12. What type of triangles are formed by the diagonal of a square and its sides? Explain.

- **13.** Lindsay was going to visit her grandmother, shop at the mall, and then return home. The route she took was in the shape of a triangle. The distance between each place she visited was 10 miles. What type of triangle is formed by the route she traveled? Explain.
- **14. Test Practice** An equilateral triangle is folded in half. What type of triangle is formed?
 - A scalene triangle
- © equilateral triangle
- ® isosceles triangle
- obtuse triangle