Good Morning 5th graders!!

I hope this finds you all healthy and happy. Here is your new packets of work.

Here are two helpful site if needed

Math Antics:

https://www.youtube.com/channel/UCBuMwIP7kHkNxdPAqtFSJTw

Khan Academy:

https://www.youtube.com/user/khanacademy

Please log in to the google classroom once you receive the link. I will use this to post videos of me going over examples as well as your assignments if you want them digitally. Here is the code.

52s7b2j

Please feel free to call or email me with questions.
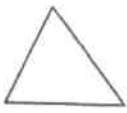
(619) 550-9278

Tracy.ellis@imagineschools.org
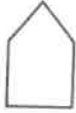
Take care and stay healthy. I miss you all!

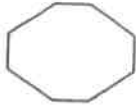Ms. Ellis

sk 4

Polygons

A polygon is a closed plane figure made up of line segments. Common polygons have names that tell the number of sides the polygon has.

Triangle
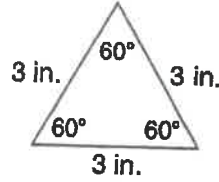3 sides

Pentagon
5 sides
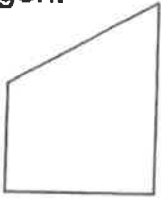
Octagon
8 sides

Hexagon
6 sides

Open Figure

Quadrilateral
4 sides

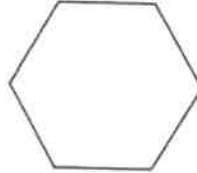A **regular polygon** has sides of equal length and angles of equal measure.

3 in.   60°   3 in.

60°   60°

3 in.

Each side is 3 in. long.
Each angle is 60°.

Name each polygon. Then tell if it appears to be a regular polygon.

1. _____
_____

2. _____
_____

3. _____
_____

4. _____
_____
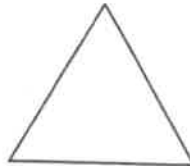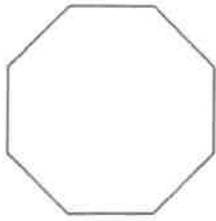
5. Shakira sorted shapes into two different groups. Use geometric terms to describe how she sorted the shapes.

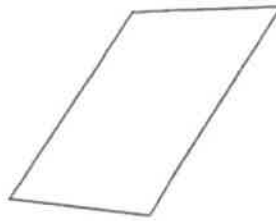| Group A	Group B

_____
_____

_____

_____

Polygons

Name each polygon. Then tell if it appears to be a regular polygon.

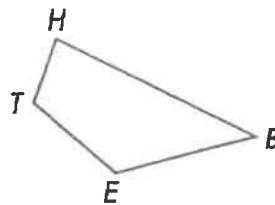1.

_____

_____

2.

_____

_____

3. Name the polygon. Name the vertices.

_____
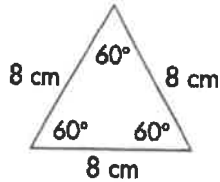
_____

4. Which polygon has eight sides?

   A quadrilateral   **B** pentagon   **C** hexagon   **D** octagon

5. **Writing to Explain** Draw two regular polygons and two that are irregular. Use geometric terms to describe one characteristic of each type.

_____

_____

_____

JK4

Triangles

You can classify triangles by the lengths of their sides and the sizes of their angles.

acute
all angles less than 90°

equilateral
all sides the same length

This triangle is both equilateral and acute.

Not all acute triangles are equilateral.
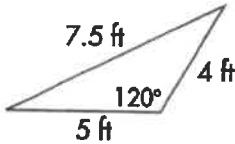
right
one right angle

isosceles
two sides the same length

This triangle is both isosceles and right.

Not all right triangles are isosceles.
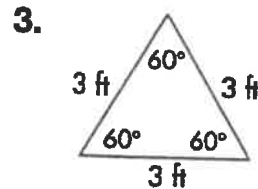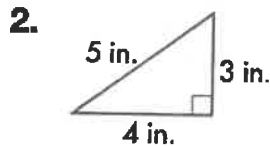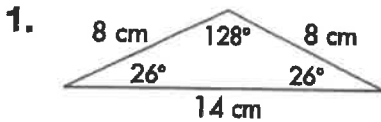
obtuse
one obtuse angle

scalene
no sides the same length

This triangle is both scalene and obtuse.

Not all obtuse triangles are scalene.

Remember that the sum of the measures of the angles of a triangle is 180°.

Classify each triangle by its sides and then by its angles.

1.

2.

3.

_____

_____

_____

_____

_____

_____

Classify the following triangles based on the angles given.

4. 40°, 100°, 40° _____

5. 14°, 98°, 68° _____

6. 38°, 38°, 104° _____

R 15·2

Triangles

Classify each triangle by its sides and then by its angles.

1.

12.42 ft / 9.5 ft / 8 ft

_____

_____

2.

60° / 4 m / 4 m / 60° / 60° / 4 m

_____

_____
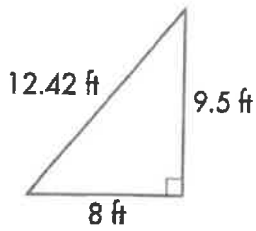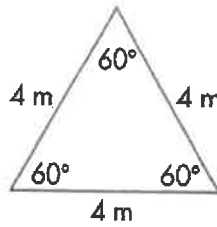
Given the measures of the angles for a triangle, classify the triangle by angles.

3. 47°, 62°, 71° _____

4. 29°, 90°, 61° _____

5. 75°, 75°, 30° _____

6. 54°, 36°, 90° _____

7. Judy bought a new tent for a camping trip. Look at the side of the tent with the opening to classify the triangle by its sides and its angles.
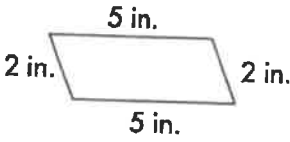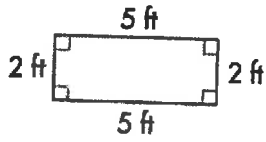
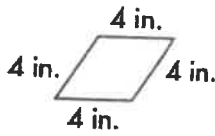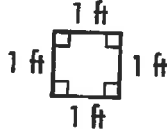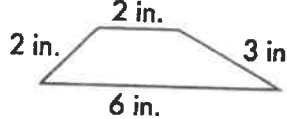4 ft / 4 ft / 3 ft

_____
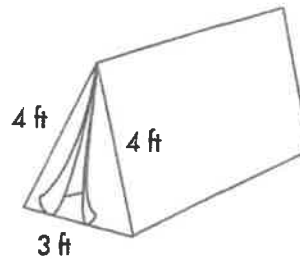
8. Which describes a scalene triangle?

A 4 equal sides   **B** 3 equal sides   **C** 2 equal sides   **D** 0 equal sides

9. The lengths of two sides of a triangle are 15 in. each. The third side measures 10 in. What type of triangle is this? Explain your answer using geometric terms.

_____

_____

jt4

Properties of Quadrilaterals

| Quadrilateral	Definition	Example
Parallelogram	A quadrilateral with both pairs of opposite sides parallel and equal in length	5 in. / 2 in. / 2 in. / 5 in.
Rectangle	A parallelogram with four right angles	5 ft / 2 ft / 2 ft / 5 ft
Rhombus	A parallelogram with all sides the same length	4 in. / 4 in. / 4 in. / 4 in.
Square	A rectangle with all sides the same length	1 ft / 1 ft / 1 ft / 1 ft
Trapezoid	A quadrilateral with only one pair of parallel sides	2 in. / 2 in. / 3 in. / 6 in.

Remember that the sum of the measures of the angles of a quadrilateral is 360°.
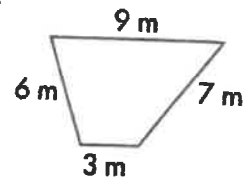
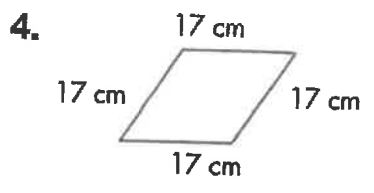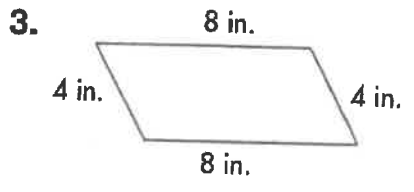Classify each quadrilateral. Be as specific as possible.

1.
6 ft
3 ft   3 ft
6 ft

_____

2.
4 in.
4 in.   4 in.
4 in.

_____

3.
9 m
6 m   7 m
3 m

_____
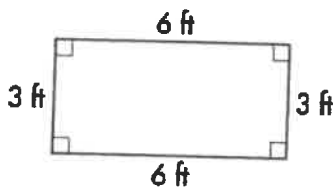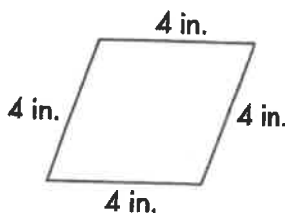
4. How is a square similar to a rhombus? How is it different?

_____

_____

Properties of Quadrilaterals
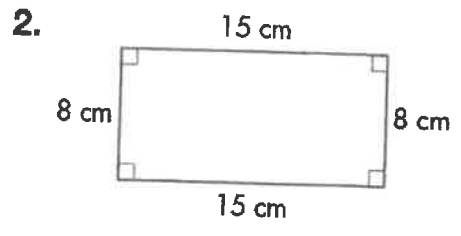
Classify each quadrilateral. Be as specific as possible.

1.

6 cm
18 cm   18 cm
20 cm

_____

2.

15 cm
8 cm   8 cm
15 cm

_____

3.

8 in.
4 in.   4 in.
8 in.

_____

4.

17 cm
17 cm   17 cm
17 cm

_____
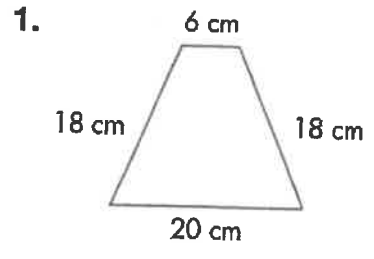
5. Name the vertices of the square to the right.

_____

F   G
L   A
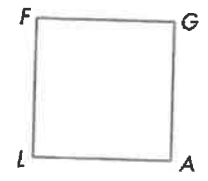
6. The angles of a quadrilateral measure 80°, 100°, 100° and 80° in this order. What kind of quadrilateral has this shape? How do you know?

_____

_____

_____

7. Can a trapezoid have four obtuse angles? Explain.

_____

_____

_____

JY 4

Special Quadrilaterals

Many special **quadrilaterals** have special properties.

A **trapezoid** has exactly one pair of parallel sides.

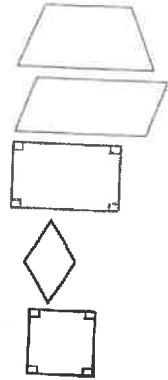A **parallelogram** has two pairs of equal parallel sides.
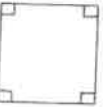
A **rectangle** is a parallelogram with 4 right angles.

A **rhombus** is a parallelogram with 4 equal sides.

A **square** is a parallelogram with 4 right angles and 4 equal sides.

Identify each polygon. Describe each polygon by as many names as possible.

1. _____   _____

2. _____   _____

3. _____   _____   _____

4. _____   _____   _____

5. _____   _____

6. _____

7. **Writing to Explain** Marvin says that all rhombuses are squares. Aretha says that all squares are rhombuses. Who is correct? Explain.

_____

_____

_____

R 15·4

Special Quadrilaterals

In **1–6**, classify each polygon in as many ways as possible.

1. _____ _____ _____

2. _____ _____ _____

3. _____ _____ _____

4. _____ _____ _____

5. _____ _____ _____

6. _____ _____ _____
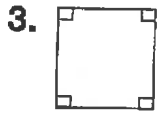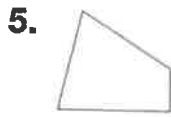
7. Draw a quadrilateral with 1 pair of parallel sides. What special quadrilateral have you drawn?

_____

8. A parallelogram has one side that is 7 inches and one side that is 11 inches. What is the perimeter of the parallelogram?
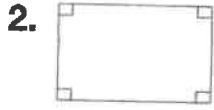
_____

9. Which shows the most likely side lengths for a parallelogram?

    A 2, 2, 6, 2   **B** 2, 6, 2, 6   **C** 2, 2, 3, 6   **D** 2, 6, 6, 6

10. **Writing to Explain** What characteristics help you tell the difference between a rhombus and a rectangle? Explain.

_____

_____

_____

JK 4

Classifying Quadrilaterals

How are special quadrilaterals related to each other?

This "family tree" shows how special quadrilaterals are related to each other.
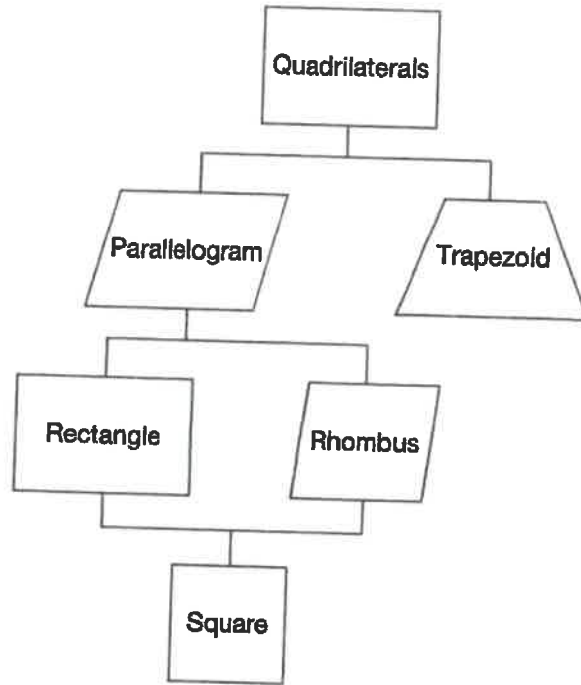
Tell whether each statement is true or false.

1. All squares are rhombuses. _____

2. Every trapezoid is a rectangle. _____

3. Squares are special parallelograms. _____

4. All quadrilaterals are squares. _____

5. All rhombuses are rectangles. _____

6. Every trapezoid is a quadrilateral. _____

7. Rhombuses are special parallelograms. _____

8. All rectangles are quadrilaterals. _____

Classifying Quadrilaterals

In **1–8**, tell whether each statement is true or false. Remember, for a statement to be true is has to be true in EVERY circumstance.

1. A rectangle is a quadrilateral. _____

2. All parallelograms are trapezoids. _____

3. A quadrilateral is a square. _____

4. A quadrilateral is a trapezoid. _____

5. A rhombus is a rectangle. _____

6. A trapezoid is a parallelogram. _____

7. A square is a rectangle. _____

8. A rectangle is a quadrilateral. _____

9. Which shows the most likely side lengths for a parallelogram?

    A 9, 4, 9, 4   **B** 9, 9, 9, 4   **C** 4, 4, 4, 9   **D** 4, 9, 9, 6

10. Draw 3 different quadrilaterals with 2 pairs of parallel sides. What are the names of the special quadrilaterals you have drawn?

    _____   _____   _____

11. A parallelogram has one side that is 9 millimeters and one side that is 13 millimeters. What is the perimeter of the parallelogram?

    _____

12. **Writing to Explain** What characteristics help you tell the difference between a parallelogram and a trapezoid? Explain.

    _____

    _____