

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

**Unit 8 Day 5 - The Think Method Classwork**

Use the classwork from the past two days to fill in this table. Then use it to answer the questions.

Write “yes” if it is always true and “no” if it is sometimes or never true.

Properties	Parallelogram	Rectangle	Rhombus	Square	Trapezoid	Isosceles Trapezoid	Kite
Both pair of opposite sides $\cong$							
Both pair of opposite angles $\cong$							
Diagonals $\cong$							
Diagonals bisect each other							
Diagonals are perpendicular							

1. A quadrilateral has 2 congruent sides. What are all the possibilities that it might be?

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

2. A quadrilateral has 2 pair of congruent sides. What are all the possibilities that it might be?

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

3. A quadrilateral has 2 pair of parallel sides. What are all the possibilities that it might be?

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

4. A quadrilateral has congruent, perpendicular diagonals. What could it be?

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

5. A quadrilateral has one right angle and the diagonals are not congruent. What is it?

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

6. A quadrilateral has one pair of congruent sides and one pair of parallel sides. What is it?

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

7. Make a rough sketch of quadrilateral COWS with vertices  $C(-4, 2)$ ,  $O(-1, 4)$ ,  $W(2, 2)$ ,  $S(-1, -1)$ .

You want to classify the quadrilateral correctly. Here are your choices:

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

The midpoint of  $\overline{CW}$  is  $(-1, 2)$  and the midpoint of  $\overline{OS}$  is  $(-1, 1.5)$ .

What quadrilaterals can you eliminate?

The slope of  $\overline{CW}$  is 0, and the slope of  $\overline{OS}$  is undefined. What does this tell you?

What quadrilaterals can be eliminated?

What type of quadrilateral is COWS?

8. Make a rough sketch of quadrilateral BIRD with vertices  $B(-4, 1)$ ,  $I(2, 4)$ ,  $R(8, 1)$ ,  $D(2, -2)$

$BR$  is 12 and  $ID$  is 6. What does this tell you?

Cross off the quadrilaterals that have been eliminated:

parallelogram      rectangle      rhombus      square      trapezoid      isosc trap      kite

The midpoint of  $\overline{BR}$  is  $(2, 1)$  and the midpoint of  $\overline{ID}$  is  $(2, 1)$ . What does this tell you?

Cross off any additional quadrilaterals that have been eliminated.

The slope of  $\overline{BR}$  is 0 and the slope of  $\overline{ID}$  is undefined. What does this tell you?

Cross off any additional quadrilaterals that have been eliminated.

The slope of  $\overline{BI}$  is  $\frac{1}{2}$  and the slope of  $\overline{IR}$  is  $-\frac{1}{2}$ . What does this tell you?

Cross off any additional quadrilaterals that have been eliminated.

What type of quadrilateral is BIRD?