


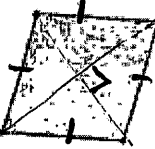







Quadrilaterals Introduction Chart

Key

Example	Name	Description of Sides	Description of Angles
	Quadrilateral	A polygon with 4 sides	
	Parallelogram	Pairs of opposite sides are <u>congruent</u> and <u>parallel</u> Diagonals bisect each other	Opposite Angles are <u>congruent</u> Consecutive angles are <u>supplementary</u> (sum is 180°)
	Rectangle	Has all the properties of <u>parallelogram</u> Diagonals are <u>congruent</u>	Has <u>right</u> angles
	Rhombus "diamond"	Has all the properties of <u>parallelogram</u> Diagonals are <u>perpendicular</u> All sides <u>congruent</u>	Diagonals bisect <u>opposite angles</u> Diagonals <u>L</u>
	Square	Has all the properties of <u>rectangle</u> , <u>rhombus</u> , and <u>parallelogram</u>	→
	Trapezoid	Has exactly one pair of opposite sides which are <u>parallel</u>	Exactly two pairs of consecutive angles are <u>supplementary</u> (Sum is 180°)
	Isosceles Trapezoid	Has all the properties of a <u>Trapezoid</u> Non-parallel sides are <u>congruent</u> Diagonals are <u>congruent</u>	Base Angles are <u>congruent</u>
	Right Trapezoid	Has all the properties of a <u>trapezoid</u>	Has a <u>right</u> angle
	Kite	Both pairs of consecutive sides are <u>congruent</u> but opposite sides are <u>not congruent</u> Diagonals are <u>perpendicular</u>	Exactly one pair of opposite angles are <u>congruent</u>

Name : _____

Score : _____

Answer Key

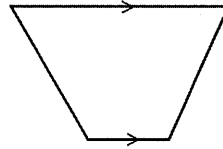
Write the name below each quadrilateral.

1)



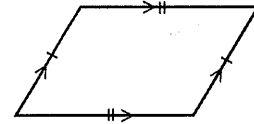
Rectangle

2)



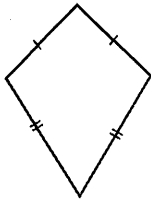
Trapezoid

3)



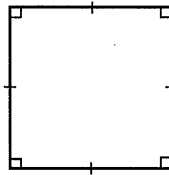
Parallelogram

4)



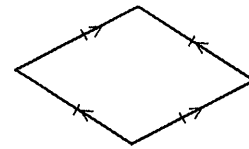
Kite

5)



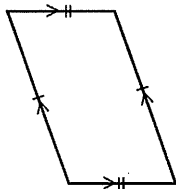
Square

6)



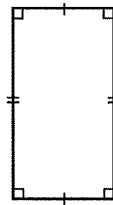
Rhombus

7)



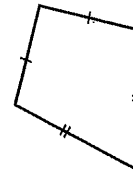
Parallelogram

8)



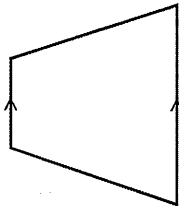
Rectangle

9)



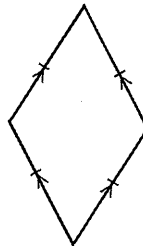
Kite

10)



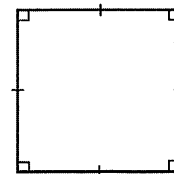
Trapezoid

11)



Rhombus

12)



Square

Name _____

SOL Quiz 6.13 Quadrilaterals**The student will describe and identify properties of quadrilaterals.**

1 Circle all of the attributes below that are true of a rhombus?

All angles are 90°	Opposite sides are parallel	All angles are 45°
All sides are congruent	Opposite angles are congruent	All angles measure 270°

2 Which term most accurately classifies the figures below?



- A) Square Rhombus C) Trapezoid
D) Parallelogram

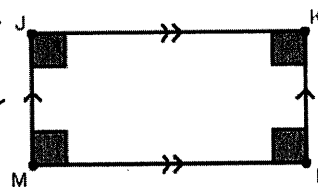
3 Circle each quadrilateral for which the following statement is always true:

Opposite angles and opposite sides are congruent.

Kite	Square	Rhombus
Rectangle	Parallelogram	Trapezoid

4 The following shape can be classified as all of the following except _____.

- A. Rectangle ✓
B. Parallelogram ✓
C. Quadrilateral ✓
D. Rhombus



5 Which of the following *best* describes the quadrilateral with only one set of parallel sides?

- A. Rectangle
B. Rhombus
C. Square
D. Trapezoid

6 Chung drew a quadrilateral with these characteristics.

- All sides are of equal length. ✓
- The opposite sides are parallel and congruent. ✓
- All angles are right angles. ✓

What type of quadrilateral did Chung draw?

- A Rectangle C Rhombus
B Right triangle D Square

Review Topics: Distance, Midpoint, Perimeter and Area, Angles of Polygons

Formulas:	Distance: $d^2 = \Delta x^2 + \Delta y^2$ $d^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$	Midpoint: $M\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
n is the number of sides	Sum of Interior Angles: $180(n - 2)$	Interior angle = $\frac{180(n - 2)}{n}$
	Sum of Exterior Angle: 360°	Exterior Angle: $\frac{360}{n}$

Find the sum of the measures of the interior angles of each convex polygon.

1. Dodecagon $n = 12$ $180(10) = 1800^\circ$

The measure of an interior angle of a regular polygon is given. Find the number of sides in the polygon.

2. 156° $156 = \frac{180(n-2)}{n}$ $156n = 180n - 360$
 $-24n = -360$ $n = 15$

Find the measure of each interior angle.

3. $2x + 15 + 2x + 15 + 3x - 20 = 360$
 $7x + 10 = 360$
 $7x = 350$
 $x = 50$
 $\angle J = 115^\circ$
 $\angle K = 130^\circ$
 $\angle M = 50^\circ$
 $\angle N = 65^\circ$

Find the measure of one interior angle of each regular polygon.

4. Octagon $n = 8$ $\text{angle} = \frac{180(8-2)}{8} = 135^\circ$

Find the measure of one exterior angle of each regular polygon.

5. 36-gon $\text{Angle} = \frac{360}{36}$ $\text{angle} = 10^\circ$

1. Find the Perimeter of the triangle

$$AB^2 = (0 - -2)^2 + (3 - -5)^2 = 2^2 + 8^2 = 68$$

$$AB = \sqrt{68} = 2\sqrt{17}$$

$$BC^2 = (6 - 0)^2 + (-3 - 3)^2 = 36 + 36 = 72$$

$$= \sqrt{72} = 6\sqrt{2}$$

$$AC^2 = (6 - -2)^2 + (-3 - 5)^2 = 8^2 + 2^2 = 68$$

$$AC = \sqrt{68} = 2\sqrt{17}$$

$$\text{Perimeter} = 2\sqrt{68} + \sqrt{72} = 24.978$$

