

# Problem of the Day

Full Name: \_\_\_\_\_ Block: \_\_\_\_\_

Geometry: April 28<sup>th</sup>

Topic: Proving Parallelogram and Rectangles

DISTANCE FORMULA:

MIDPOINT FORMULA:

SLOPE FORMULA:

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \quad (x_m, y_m) = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \quad m = \frac{y_2 - y_1}{x_2 - x_1}$$

The vertices of KARI are K(2,1), A(4,4), R(10,0) and I(8, -3). Show that KARI is a rectangle.  
(Remember that you must **first** show that KARI is a parallelogram, using Slope)

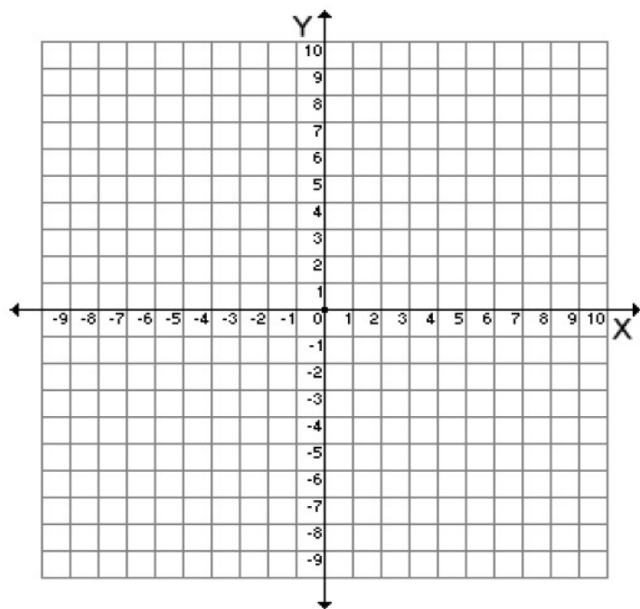
Find the **Slope** of each side to the nearest tenth.

KA = \_\_\_\_\_

AR = \_\_\_\_\_

RI = \_\_\_\_\_

IK = \_\_\_\_\_



Find the Distance of each side to the nearest tenth.

KA = \_\_\_\_\_

AR = \_\_\_\_\_

RI = \_\_\_\_\_

IK = \_\_\_\_\_

Find the **Diagonals**.

Find the Diagonal: KR = \_\_\_\_\_

Find the Diagonal AI = \_\_\_\_\_

Based on my answers above, I have proven this shape to be a \_\_\_\_\_  
because...