

It's time for...RECTANGLES on the Coordinate Plane



Do Now: Kindly list the 2 properties that prove a parallelogram is a rectangle:

1. _____

2. _____

And now...let's discuss how we can show the following on the **coordinate plane**:

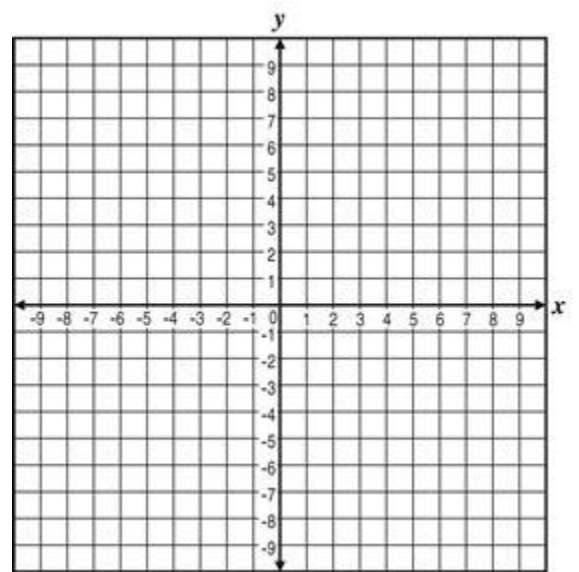
How can we show two sides form a right angle?

How can we show diagonals are congruent?

Time to put this into practice!

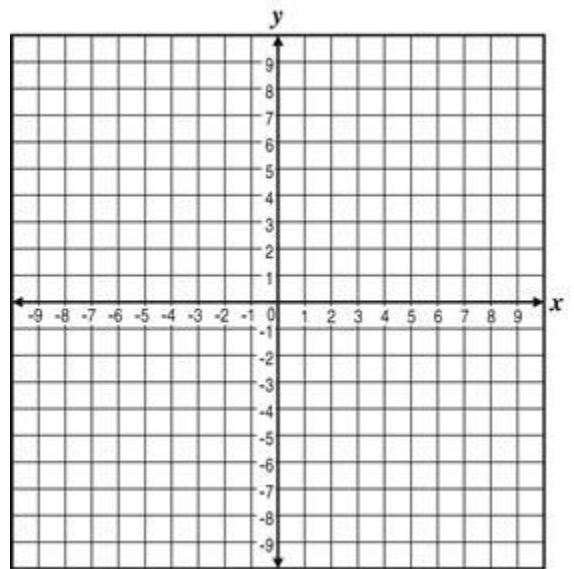
1. Quadrilateral JAKE has vertices $J(3,1)$, $A(-6,7)$, $K(-8,4)$, and $E(1,-2)$.

Prove that JAKE is a rectangle.



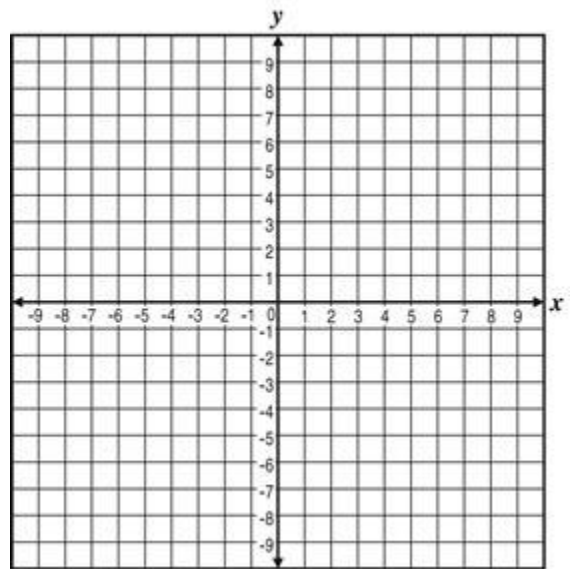
2. Quadrilateral SOPH has vertices $S(4,1)$, $O(2,7)$, $P(-7,4)$, and $H(-5,-2)$.

Prove that SOPH is a rectangle.



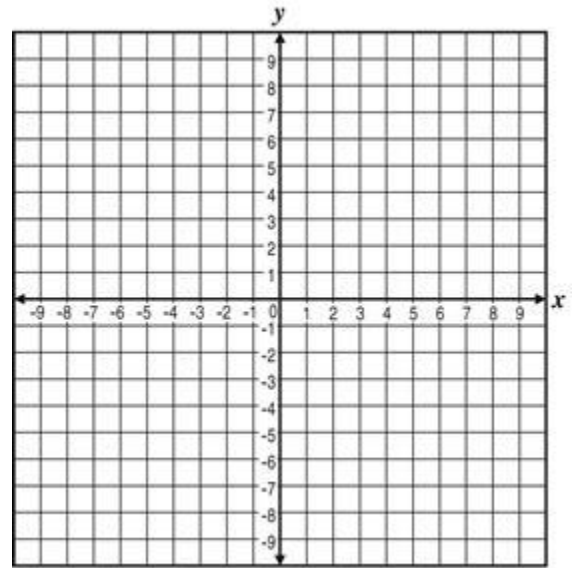
3. Quadrilateral RACH has vertices $R(-3,5)$, $A(5,-1)$, $C(2,-5)$, and $H(-6,1)$.

Prove that RACH is a rectangle.



4. Quadrilateral WTMC has vertices $W(2,-2)$, $T(8,-1)$, $M(9,3)$, and $C(3,2)$.

- a) Prove that WTMC is a parallelogram.
- b) Prove that WTMC is not a rectangle.



5.

Prove that quadrilateral PLUS with the vertices $P(2,1)$, $L(6,3)$, $U(5,5)$, and $S(1,3)$ is a rectangle.

