事 Determine whether an ordered pair is a solution of an equation.

* Use the Distance Formula to find the distance between two points.
*東 Use the Midpoint Formula to find the midpoint of a segment.

Rectangular Coordinate System (Cartesian Coordinate System)

origin
$x$-axis
$y$-axis

Quadrants

Ordered pair


Identify the coordinates of these points.

## Graph an equation.


(1) EXAMPLE

Check to see if each ordered pair is a solution of the equation.

$$
y^{2}-4 x=8
$$

a. $(0,6)$
b. $(-1,-2)$
c. $(-1,3)$
d. $(2,4)$


## Midpoint of a segment



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(2) EXAMPLE
Find the distance between these two points: \((0,-5)\) and \((2,-8)\).
```

Find the midpoint of the segment above.

## (3) EXAMPLE

Show that these points are the vertices of a right triangle.
A $(0,9)$
B $(9,4)$
C $(2,2)$

