

OBJECTIVE 4: Determining Whether an Ordered Pair is a Solution

Coordinates or ordered pairs can be checked to see if they work as a solution. When you have one variable then you have one solution, but if you have two variables then you have two solutions or an ordered pair. You can use a table or t-chart for showing work with coordinates.

Task 4: Determine whether each ordered pair is a solution of the equation $x - 2y = 6$.

- a) $(6, 0)$
 $6 - 2(0) = 6$
 $6 = 6 \checkmark$
- b) $(0, 3)$
 $0 - 2(3) = 6$
 $-6 \neq 6$
 \emptyset
- c) $(1, -\frac{5}{2})$
 $1 - 2(-\frac{5}{2}) = 6$
 $1 - (-5) = 6$
 $6 = 6 \checkmark$

OBJECTIVE 5: Completing Ordered Pair Solutions

If you know one value then you can find the other value of the ordered pair by replacing the one variable with its value and solving for the other variable.

Task 5: Complete the following ordered pair solutions of the equation $3x + y = 12$.

- a) $(0, 12)$
 $3(0) + y = 12$
 $y = 12$
- b) $(2, 6)$
 $3x + y = 12$
 $3x = 6$
 $x = 2$
- c) $(-1, 15)$
 $3(-1) + y = 12$
 $y = 15$

Task 6: Complete the table for the equation provided.

a) $y = 3x$

x	y
-1	-3
0	0
-3	-9

$y = 3(-1)$
 $0 = 3x$
 $-9 = 3x$

b) $y = \frac{1}{5}x - 2$

x	y
-10	-4
0	-2
10	0

NOTES to Myself about the Lesson

- make sure to plug into the correct variable
- use your calculator for almost everything!

Task 7: Finding the Value of a Computer

A computer was recently purchased for a small business for \$2,000. The business manager predicts that the computer will be used for 5 years and the value in dollars y of the computer in x years is $y = -300x + 2000$. Complete the table.

x	0	1	2	3	4	5
y	2000	1700	1400	1100	800	500

Summary:

- origin x-coordinate y-axis four x-axis solution one quadrant y-coordinate
1. The horizontal axis is called the x-axis and the vertical axis is called the y-axis.
 2. The intersection of the horizontal axis and the vertical axis is a point called the origin.
 3. The axes divide the plane into regions called quadrants. There are four of these regions.
 4. In the ordered pair of numbers $(-2, 5)$, the number -2 is called the x-coordinate and the number 5 is called the y-coordinate.
 5. Each ordered pair of numbers corresponds to one point in the plane.
 6. An ordered pair is a(n) solution of an equation in two variables if replacing the variable by the coordinates of the ordered pair results in a true statement.

Still need help with: