



Name _____ Date _____

Equations with Two Values (Pages 437–440)

Some functions use an equation with two different variables—one for the input value and one for the output value. Each ordered pair of values that makes the equation true is a solution of the equation. Each point on the graph of the equation represents an ordered pair that makes the equation true.

Making a Table for an Equation with Two Variables

- To find some of the solutions for an equation with two variables, x and y , make a function table.
- To make the table, choose a value for x and find the matching value for y by replacing x with the value you chose.
- Then choose another value for x , replace x in the equation, and solve for y again.

EXAMPLE

Find four solutions of the equation $y = 3x - 2$.

Choose some values for x . For example, begin with $x = -2$.

Replace x in the equation $y = 3x - 2$ with the value -2 .

Then $y = 3(-2) - 2$, which simplifies to $y = -8$. Put this in a table.

Then choose other values for x , such as $0, 1$, and 2 , and repeat the process to complete the table. Four solutions are $(-2, -8)$, $(0, -2)$, $(1, 1)$, and $(2, 4)$.

x	y	(x, y)
-2	-8	$(-2, -8)$
0	-2	$(0, -2)$
1	1	$(1, 1)$
2	4	$(2, 4)$

Try These Together

1. Complete the table for $y = x + 2$.

x	y
-3	
0	
3	
6	

HINT: Replace x with -3 in the equation $y = x + 2$.

2. Complete the table for $y = 2x$.

x	y
-2	
-1	
0.5	
3	

HINT: Replace x with -2 in the equation $y = 2x$.

PRACTICE

Find four solutions for each equation.

3. $y = 5x + 3$

4. $y = -2x - 1$

5. $3x + 1 = y$

6. $y = 12x - 24$



7. **Standardized Test Practice** You are driving on a trip. If y is the distance traveled and x is the number of hours traveled, assuming you average 60 mph, which of the following equations represents this situation?

A $y = 60x$

B $y = \frac{x}{60}$

C $y = x + 60$

D $60 = x + y$

Answers: 1. $-1, 2, 5, 8$ 2. $-4, -2, 1, 6$ 3-6. Answers will vary. Sample answers are given. 3. $(-1, -2), (0, 3), (1, 8), (2, 13)$ 4. $(-1, 1), (0, -1), (1, -3), (2, -5)$ 5. $(-1, -2), (0, 1), (1, 4), (2, 7)$ 6. $(-1, -36), (0, -24), (1, -12), (2, 0)$ 7. **A**