Math Virtual Learning

Algebra 1 S-1

April 21, 2020

Grade/Course
Lesson: [April 20]

Objective/Learning Target:
Students will find the solution to a system of linear equations by substitution.

Click the link for a [Brainstarter](#).

Let's Get Started:
Watch the Video

Remember "Take Notes"

$$x + 3y = 6 \qquad 2x + 3y = -12$$

1. Isolate a variables in one of the equations (either $y=$ or $x=$)

$$x + 3y = 6$$
$$-3y \qquad -3y$$
$$x = 6 - 3y$$

2. Substitute the isolated variable into the second equation.
$$2(6 - 3y) + 8y = -12$$

   You now have an equation with only one variable

3. Solve the equation

$$12 - 6y + 8y = -12$$
$$12 + 2y = -12$$
$$-12 \qquad -12$$
$$\underline{2y} = \underline{-24}$$
$$\,\,2 \qquad\;\; 2$$
$$y = -12$$

4. Substitute the solution from step 3 into one of the original equations and solve.

$$x + 3y = 6$$
$$x + 3(-12) = 6$$
$$x + -36 = 6$$
$$\qquad +36 \quad +36$$
$$X = 42$$

5. Your intersection point is (42, -12)

6. Check your solution by substituting the values into one of the equations.

$$x + 3y = 6$$
$$42 + 3(-12) = 6$$
$$42 - 36 = 6$$
$$6 = 6$$

Now it's your turn!

- [Click the Link](#)
- Click Join
- Click Continue without Signing In
- Enter your first name
- Follow the directions to complete each part of the activity.

Additional Practice:

Click on the link below to get additional practice and to check your understanding!

[Solution to a System of Equations](#)