Inspiring Greatness

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

Algebra 1 S-1

April 24, 2020

Algebra 1 S1
Lesson: April 24, 2020

Objective/Learning Target:

Students will select the best method to solve a system of linear equations.

Brainstarter

Click the link to practice solving systems using elimination.

Let's Get Started

Watch Video:

Remember "Take Notes"

Methods for Solving Systems

Graphing

Use when:
Equation in slope Intercept form
$(y = mx + b)$

Example
$y = 2x + 4$
$y = -1/2x - 2$

Substitution

Use when:
One equation is solved for x or y

Example
$x = 3y + 1$
$2x + y = 10$

Elimination

Use when:
Both equations are in standard form

Example
$-2x + 4y = 5$
$2x + y = 10$

10x - 4y = -4
-20x + 9y = 14

Elimination

(2)10x -(2) 4y =(2) -4
-20x + 9y = 14

20x - 8y = -8
-20x + 9y = 14
1y = 6

10x - 4y(6) = -4
10 x -24 = -4
+24 +24
10x = 20
10 10
x = 2 (2, 6)
10(2) - 4(6) = -4 20-24 = -4
-4 = -4

2x - 3y = -1
y = x - 1

Substitution

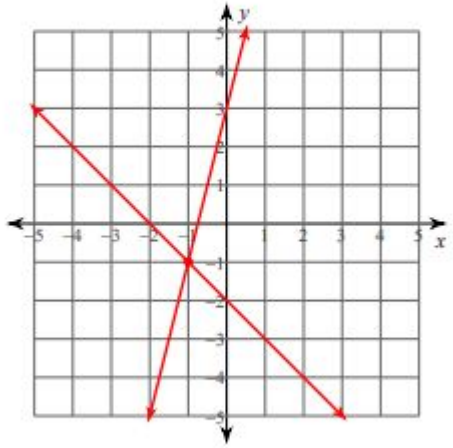
2x - 3(x - 1) = -1
2x - 3x + 3 = -1
-1x + 3 = -1
-1x = -4
x= 4

y = 4 - 1
y = 3 (4, 3)

2 (4) - 3(3) = -1
8 - 9 = -1
-1 = -1

Y = 4x + 3
Y = -x - 2
Graphing

2) $y = 4x + 3$
$y = -x - 2$



$(-1, -1)$

Now it’s your turn!

1). $-3x - 3y = 3$
$y = -5x - 17$

2). $8x + y = -16$
$-3x + y = -5$

3). $y = \frac{1}{3}x - 3$
$y = -x + 1$

4). $y = -2$
$4x - 3y = 18$

Answer Key:

Once you have completed the problems, check your answers here.

1). Substitution

$$-3x - 3y = 3$$
$$y = -5x - 17$$

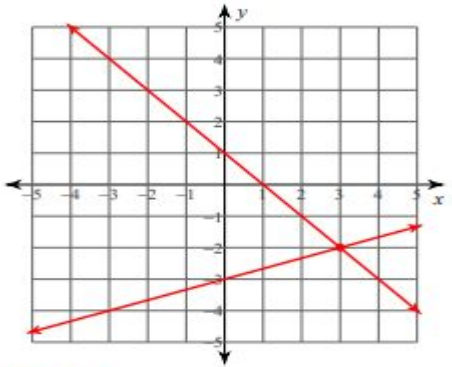
$(-4, 3)$

2). Elimination

$$8x + y = -16$$
$$-3x + y = -5$$

$(-1, -8)$

3). graphing



$(3, -2)$

4). substitution

$$y = -2$$
$$4x - 3y = 18$$

$(3, -2)$

Additional Practice:

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

Solution to a System of Equations