Activator

What is the x-value of the intersection if $y = -3$ when $y = 4x + 5$?

Is the point (-2,-3) on both tables? Yes

Why, it is on both lines.

$$(-3) = 4x + 5$$
$$-3 = 4x + 5$$
$$-5 \quad -5$$
$$-8 = 4x$$
$$\div 4 \quad \div 4$$
$$-2 = x$$

The solution is (-2, -3)

x	y
-2	-3

Today's Objective

Unit 5
Lesson 2

Students will be able to use substitution to compute the solution (intersection/answer).




Announcements

Today's New Vocab (1 of 4)

What is the solution to the system of equations?

$Y = 8x + 30$ and $x = -2$

$Y = 8(-2) + 30$

$Y = -16 + 30$

$Y = 14$

The solution is the point of intersection of the two lines.

(x, y)

$(-2, 14)$

Today's New Vocab (2 of 4)

Is the point (-2,14) on the line $y = 8x + 30$?

$(14) = 8(-2) + 30$

$14 = -16 + 30$

$14 = 14$

Is the point (-2,14) on the line $x = -2$?

$(-2) = -2$

$-2 = -2$

Both of the last equations are TRUE.

So, the point (-2,14) is a solution to the system.

Today's New Vocab (3 of 4)

What is the x-value of the system of equations?

$Y = -6x$ and $y = 2x + 24$

The x-value of the point of intersection of the two lines is…

$x =$ _____

$(-6x) = 2x + 24$

$-6x = 2x + 24$

$-2x \quad -2x$

$-8x = 24$

$\div -8 \quad \div -8$

$x = -3$

Today's New Vocab (4 of 4)

What is the solution to the system of equations?

$x = -3$ $\quad Y = -6x$ and $\quad y = 2x + 24$

from #3 $\quad Y = -6(-3)$ $\quad y = 2(-3) + 24$

$Y = 18$ $\quad y = -6 + 24$

$y = 18$

The solution is the point of intersection of the two lines. (x , y)

$(-3, 18)$

Work Period

What is the value of d in the systems of equations?

$$c + 3d = 8 \text{ and } c = 4d - 6?$$

$(4d - 6) + 3d = 8$

$4d - 6 + 3d = 8$

$7d - 6 = 8$

$+6 \quad +6$

$7d = 14$

$\div 7 \quad \div 7$

$d = 2$

(c , d)

$d = \frac{2}{}$

(c , 2)

Group Work Questions

Pages 7-8
Lesson 5.2

Directions: All groups, please do all of the questions. Use your notes from last class to help you. [Ask 2 people before you ask me.]

Last class, we did Lesson 5.2 Notes.

1st Stop @ 8:16

*One person from each group will present one question.

Exit Ticket

What is the solution to the system of equations?

$c + 3d = 8$ and $c = 4d - 6$?

d = 2 from the work period

c + 3(2) = 8

c + 6 = 8

- 6 -6

c = 2

c = 4(2) - 6

c = 8 - 6

c = 2

The solution is the point of intersection of the two lines.

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Lesson 5.2

(c, 2) (2, 2)

Lesson 5.2 Game

Each question asked earns $1.

Matching

Match the question, substitution, and answer together. There should be 8 different groups with 3 in each group.

Each correct group earns $5.

Note: You may need to write down some numbers.

***Ask a partner for help before you ask me.*