Monday, October 8th, 2018

Equation	Steps
1. $3(5x + 1) = 13x + 5$	Given
2. $15x+3=13x+5$	Distrubtive POE
3. $2x+3=5$	Combine
4. $2x=2$	Subtraction POE
5. $x=1$	Divison POE

Sep 16-11:56 AM

Quiz Review

Simplify the following fractional operations:

MG	$\frac{1}{4}+\frac{3}{5}$ $\frac{17}{20}$	$\frac{2}{5}+3$ $\frac{17}{5}$
TT	$\frac{4}{3}-\frac{2}{5}$ $\frac{14}{15}$	$\frac{7}{9}-\frac{1}{6}$ $\frac{41}{6}$
MD	$\frac{3}{2} \cdot \frac{8}{12}$ $1.$	$\frac{5}{9} \cdot 11$ $\frac{55}{9}$
KA	$\frac{3}{5} \div \frac{2}{3}$ $\frac{9}{10}$	$\frac{5}{9} \div 4$ $\frac{5}{36}$

TD↓   IC↓

Equation	Steps
$2(x+6) = -24$	Given
$2x+12=-24$	Distributive Property
$2x=-36$	Subtraction POE
$x=-18$	Division Poe

Oct 4-8:30 AM

Jaden has a prepaid phone plan (Plan A) that charges 18 cents for each text sent and 15 cents per minute for calls.

1. If Jaden uses only text a. Write an equation for the cost C of sending t texts.

$C = .18t$

b. How much will it cost Jaden to send 15 texts? Justify your answer.

$t=18$ $C = .18 (15) \$2.70$ ( ) *

c. If Jaden has $10.26, how many texts can he send? Justify your answer.

$\frac{10.26}{.18} = \frac{.18t}{.18}$ $t = 57$

2. If Jaden only uses the talking features of his plan, a. Write an equation for the cost C of talking m minutes.

$C = .15m$

b. How much will it cost Jaden to talk for 15 minutes? Justify your answer.

$C = .15 \cdot 15$ $\$2.25 = C$

c. If Jaden has $23. How many minutes can he talk? Justify your answer.

$23.10 = .145m$ $m = 23.10 \div .15$ $154m$ $15\overline{)23.10}$

3. If Jaden uses both talk and text, a. Write an equation for the cost C of sending t text and talking m minutes.

b. How much will it cost Jaden to send 7 texts and talk for 12 minutes? Justify your answer.

$.18(7) + .15(12) = C$

$C = 3.06$

Oct 4-8:30 AM

Tuesday, October 9th, 2018

Write the slope-intercept form of the equation of each line.

1) $3x - 2y = -16$ 2) $13x - 11y = -12$

3) $9x - 7y = -7$ 4) $x - 3y = 6$

Sep 16-11:56 AM

Graphing the 4 Types of Linear Equations   Date_____ Period____

Sketch the graph of each line.

1) $x = 5$ 2) $y = 2$

3) $2x + y = -1$ 4) $x - 3y = 12$

Oct 4-8:44 AM

Graphing Lines & Killing Zombies

Graph each line and match it to the zombie that it "kills".
To kill a zombie the line must run through any part of its body.
Each line should only kill one zombie. If you kill more than one you were not precise enough.

Oct 4-8:46 AM

Wednesday, October 10th, 2018

5) $6x + 5y = -15$ 6) $4x - y = 1$

7) $11x - 4y = 32$ 8) $11x - 8y = -48$

Sep 16-11:56 AM

Foundations of Algebra   Unit 3 – Equations and Inequalities   Notes
Name _____ Date _____

Day 5 – Solving by Graphing

Systems of 2 linear equations:
- 2 _____ with 2 _____ (x & y) each.
  $Ax + By = C$
  $Dx + Ey = F$
- Solution of a system: an _____, (____) that makes **both** equations true.

Check whether the ordered pairs are solutions of the system: $x - 3y = -5$ $-2x + 3y = 10$

   A. $(1, 4)$ B. $(-5, 0)$

How to solve systems by graphing:
1. Graph each equation on the _____ coordinate plane.
2. If the lines _____: The point (_____) where the lines intersect is the _____.

1. $y = 3x - 12$ 2. $y = -x - 2$
    $y = -2x + 3$ $y = \frac{2}{3}x + 3$

3. $y = x + 4$ 4. $x - y = 5$
    $y = -x + 2$ $2x + 2y = 10$

Oct 4-9:03 AM

Foundations of Algebra   Unit 3 – Equations and Inequalities   Practice
Name: _____ Date: _____

Day 5 – Solving By Graphing

Check whether the ordered pairs are solutions of the system: $x - 2y = -10$ $2x + 3y = 1$

   1. **(-4, 3)**   2. **(0, 5)**

Solve the System of Equations by Graphing. Write your final answer as an **Ordered Pair**.

3. $y = -3x + 5$ 4. $y = -2x$
    $y = 2x - 5$ $y = x + 3$

5. $y = 2x - 6$ 6. $x + 2y = 6$
    $3x + y = -1$ $3x - 2y = 2$

Oct 4-9:03 AM

Thursday, October 11th, 2018

Tom is a tennis instructor. He gives individual lessons for $30 an hour and does team lessons for $60 per hourly session. He has trouble getting teams to sign up when league play is not going on, so sometimes he has to count on individual lessons for his income.

1. If Tom only does individual lessons,

a. Write an equation for his total income T working i hours.

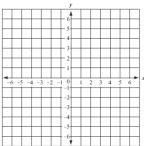b. How much will he make if he works 20 hours a week? Justify your answer.

c. If he wants to make $900 dollars per week, how many hours does he have to work? Justify your answer.

Sep 16-11:56 AM

Solving Linear Systems with Graphing   83

Definition: A Linear System is a set of two linear equations.

Example: $y = -2x$ and $y = x + 3$

   1) Does the point $(0, 4)$ make either equation true? Substitute it in and find out.

   2) Does the point $(2, 5)$ make either equation true? Explain.

   3) Does the point $(-1, 2)$ make either equation true? Explain.

If a point works in **both** equations of a linear system, then that point must be the <u>SOLUTION</u> to the linear system. When you solve a linear system you find that one point makes both equations true.

   4) What point is the solution to the system above? _____

Plot **both** equations in the same coordinate plane below. $y = -2x$ and $y = x + 3$

   5) At what point do the two lines intersect? _____ Compare this with your answer for #4...

An ordered pair that makes a linear equation TRUE is called a _____

The point that the two lines _____ is the solution to the system!

To solve a system of linear equations, the ordered pair must work for _____ equations!

Oct 4-9:08 AM

Steps for Solving a Linear System Using Graphing:

1. Put the equations in slope-intercept or standard form.
2. Graph each equation on the same coordinate system.
3. Locate the point of intersection and write it down.
4. Verify that the point makes both equations true!!

Example: $y = 2x$ Point_____
         $y = -x + 3$ Verify:

Example: $y - 2x = -4$ Point_____
         $y = x - 2$ Verify:

Try these:

1. $y = -x + 5$ 2. $2x - y = 2$ 3. $2x + y = 2$
    $y = x + 1$ $x = 3$ $x - y = 4$

Oct 4-9:08 AM

2

Friday, October 12th, 2018

Tom is a tennis instructor. He gives individual lessons for $30 an hour and does team lessons for $60 per hourly session. He has trouble getting teams to sign up when league play is not going on, so sometimes he has to count on individual lessons for his income.

1. If Tom only does individual lessons,

a. Write an equation for his total income T working i hours.

b. How much will he make if he works 20 hours a week? Justify your answer.
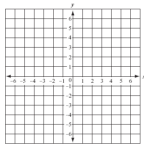
c. If he wants to make $900 dollars per week, how many hours does he have to work? Justify your answer.

Sep 16-11:56 AM

7.1 – Solving Systems of Equations by Graphing Homework
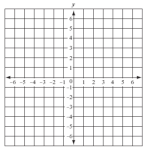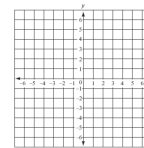**Solve these linear systems by graphing.**　　　　　**84**

1) $y = -x + 3$ and $y = 2x - 6$

2) $y = -x + 3$ and $y = x + 1$

3) $x - y = 2$ and $x + y = -6$

4) $x + y = -2$ and $7x - 4y = 8$

Oct 4-9:10 AM

Graphing Systems of Equations

Solve each system of equations by graphing.

1. $x + y = 5$
   $x - y = 1$

2. $4x - 2y = -8$
   $y = 2x + 4$

3. $y = -3x + 2$
   $y = 2x - 3$

4. $y = -\frac{3}{2}x + 1$
   $y = \frac{1}{2}x - 3$

5. $4x - 6y = 12$
   $2x + 2y = 6$

6. $y = 3$
   $x - y = -4$

7. $y = \frac{1}{4}x + 2$
   $y = -x - 2$

8. $4x + 6y = -12$
   $2x + 3y = 6$

9. $y = -\frac{1}{2}x + 4$
   $y = \frac{3}{2}x$

Oct 4-9:10 AM

3