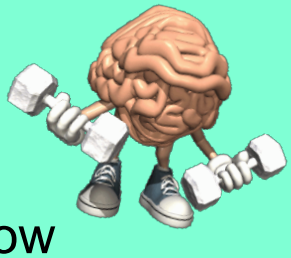
Dec. 18, 2019

Warm Up



open book Quiz Tomorrow

Do the following on your own loose leaf

Solve each system by substitution.

3) $3x + 6y = 3$
$x - 4y = -23$

sub
$x = 4y - 23$

4) $x - 7y = -1$
$2x - 2y = -2$

Solve each system by elimination.

5) $-3x - y = -17$
$3x + 7y = -25$

6) $2x - 6y = -16$
$2x - 7y = -18$

3) $3x + 6y = 3$
$x = -23 + 4y$

$3x + 6y = 3$

$3(-23 + 4y) + 6y = 3$

$-69 + 12y + 6y = 3$

$-69 + 18y = 3$ (+69)

$18y = 72$

$\frac{18y}{18} = \frac{72}{18}$

$y = 4$

sub

$x = 4y - 23$

$= 4(4) - 23$

$= 16 - 23$

$x = -7$

$(-7, 4)$

$$3x + 6y = 3$$
$$x - 4y = -23$$

$$(-7, 4)$$

4)

$$x - 7y = -1 \Rightarrow x = 7y - 1$$

$$2x - 2y = -2$$

$(-1, 0)$

$2(x) - 2y = -2$

$2(7y-1) - 2y = 2$

$14y - 2 - 2y = 2$

$$-3x - y = -17$$
$$3x + 7y = -25$$
$$(8, -7)$$

$$2x - 6y = -16$$
$$2x - 7y = -18$$
$$(-2, 2)$$

Math 10 (Numbers Relations & Functions) Name_____

Elimination Same sheet as Yesterday Date_____

Solve each system by elimination.

1) $2x + 8y = 8$
$-3x - 8y = -4$

2) $-x + 4y = 7$
$x + 4y = 25$

3) $-9x + 8y = 15$
$-9x + 6y = 27$

4) $-x - 5y = -3$
$-x + 3y = 13$

5) $-5x + 2y = 9$
$6x - 2y = -8$

6) $5x + 5y = 30$
$5x + 2y = 12$

7) $-10x + 8y = -28$
$9x + 4y = 14$

8) $-6x + y = -15$
$-12x - 3y = -15$

9) $-5x + 10y = -10$
$-7x - 5y = -14$

10) $-5x + 10y = 5$
$10x - 4y = 6$

11) $7x - 2y = 24$
$3x + 9y = 30$

12) $-3x - 2y = 2$
$-5x - 3y = 6$

13) $3x - 6y = 30$
$-10x - 9y = -13$

14) $7x - 10y = 0$
$-9x - 4y = 0$

15) $-10x + 7y = 12$
$-3x + 6y = -12$

16) $-3x + 4y = 2$
$-5x + 3y = 29$

17) $-10x - 6y = -14$
$8x + 5y = 11$

18) $-3x - 2y = 8$
$-8x - 7y = 18$

HW Solutions

7) $-10x + 8y = -28$
$9x + 4y = 14$
$(2, -1)$

8) $-6x + y = -15$
$-12x - 3y = -15$
$(2, -3)$

9) $-5x + 10y = -10$
$-7x - 5y = -14$
$(2, 0)$

10) $-5x + 10y = 5$
$10x - 4y = 6$
$(1, 1)$

11) $7x - 2y = 24$
$3x + 9y = 30$
$(4, 2)$

12) $-3x - 2y = 2$
$-5x - 3y = 6$
$(-6, 8)$

13) $3x - 6y = 30$
$-10x - 9y = -13$
$(4, -3)$

14) $7x - 10y = 0$
$-9x - 4y = 0$
$(0, 0)$

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Math 10 (Numbers Relations & Functions) Name_____

Elimination Did Dec . 21 & 22 Date_____

Solve each system by elimination.

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$(-4, 2)$

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$(9, 4)$

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$-x + 3y = 13$
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$6x - 2y = -8$
$(1, 7)$

6) $5x + 5y = 30$
$5x + 2y = 12$
$(0, 6)$

Recall

Elimination using Multiplication

Consider the system

$x + 2y = 6$

$3x + 3y = -6$

How are they related?

What could we do to equation 1 to make the "x" equal?

answer

Recall

Elimination using Multiplication

Consider the system

$x + 2y = 6$

$3x + 3y = -6$

How are they related?

What could we do to equation 1 to make the "x" equal?

multiply equation 1 by 3

Recall

Elimination using Multiplication

Consider the system

$3x + 6y = 18$

$3x + 3y = -6$

Now subtract the equations

Recall

Elimination using Multiplication

Consider the system

$$3x + 6y = 18$$
$$-3x - 3y = +6$$

Now subtract the equations

Answer

Recall

Elimination using Multiplication

Consider the system

$$3x + 6y = 18$$
$$-3x - 3y = +6$$

Now subtract the equations

$$3y = 24$$

$$y = 8$$

Sub into equation 1 (original) or the above

$$x + 2y = 6$$
$$x + 2(8) = 6$$
$$x + 16 = 6$$
$$x = 6 - 16$$
$$x = -10$$

$$(-10, 6)$$

Elimination using Division

$x + 2y = 6$

$3x + 3y = -6$ all divisible by →

Answer:

You try

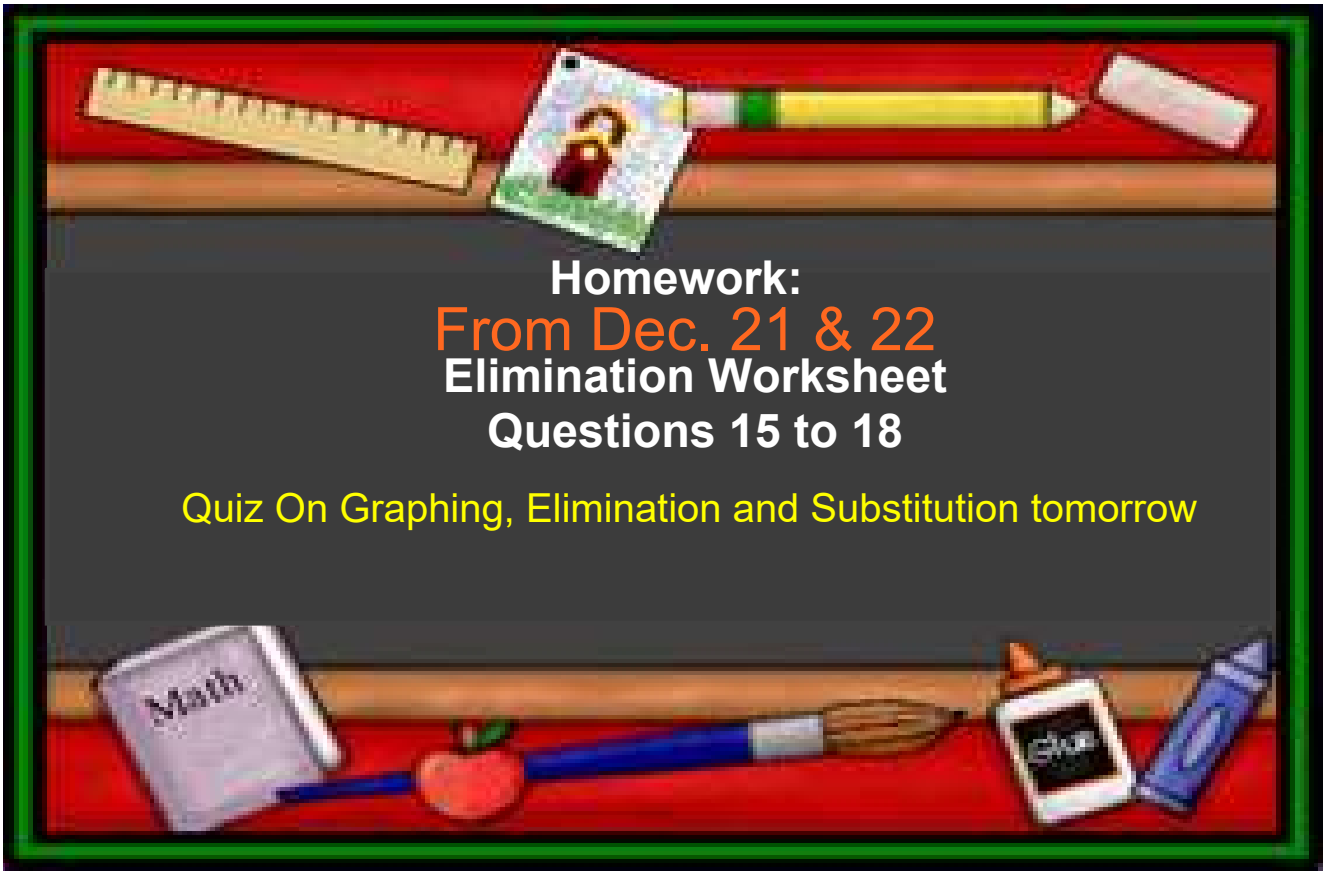
$x + 2y = 5$

$2x + 6y = 12$

You try either way

11) $7x - 2y = 24$
$3x + 9y = 30$
$(4, 2)$

12) $-3x - 2y = 2$
$-5x - 3y = 6$
$(-6, 8)$


Homework:
From Dec. 21 & 22
Elimination Worksheet
Questions 15 to 18
Quiz On Graphing, Elimination and Substitution tomorrow
Math

Elimination

Date_____

Solve each system by elimination.

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$(-6, 8)$

1) $7x - 2y = 24$ ①
$3x + 9y = 30$ ②
$(4, 2)$

① x 3
$3(7x - 2y = 24)$
New ① $21x - 6y = 72$

12) $-3x - 2y =$
$-5x - 3y =$
$(-6, 8)$

② x 7
$7(3x + 9y = 30)$
New ② $21x + 63y = 210$

$21x - 6y = 72$
$-(21x + 63y = 210)$
$-69y = -138$

$y = \frac{-138}{-69}$

$y = 2$

$7x - 2y = 24$
$7x - 2(2) = 24$
$7x - 4 = 24$
$7x = 28$
$x = 4$

13) ① $3x - 6y = 30$

② $-10x - 9y = -13$

$(4, -3)$

14) $7x$

-9

$(0,$

① x 3

$3(3x-6y=30)$

New ①

$9x-18y=90$

② x -2

$-2(10x-9y=-13)$

$20x+18y=26$

New ②

$9x-18y=90$

$+ \quad (20x+18y=26)$

$29x = 116$

$x=\frac{116}{29}$

$x=4$

$3x-6y=30$

$3(4)-6y=30$

$12-6y=30$

$-6y=18$

$y=-3$

15) $-10x + 7y = 12$
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$(-4, -4)$

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