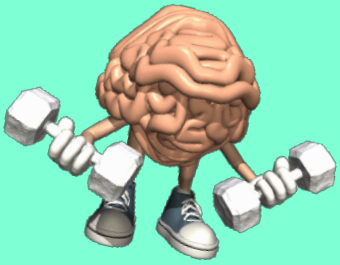
June 1, 2017

Warm Up



Solve each system by substitution.

3) $3x + 6y = 3$
$x - 4y = -23$ ③

$x = 4y - 23$

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

Solve each system by elimination.

5) $-3x - 1y = -17$
$3x + 7y = -25$

$6y = -42$

$y = -7$

sub ①

$-3x - 1y = -17$

$-3x - 1(-7) = -17$

$-3x + 7 = -17$

$-3x = -24$

$x = 8$

$(8, -7)$

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

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

$1y = 2$

$y = 2$

sub ①

$2x - 6y = -16$

$2x - 6(2) = -16$

$2x - 12 = -16$

$2x = -4$

$x = -2$

① $3x + 6y = 3$

② $x - 4y = -23$ (+4y, +4y)

③ $x = 4y - 23$ ← ②

↓ sub ①

$3(x) + 6y = 3$

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

$12y - 69 + 6y = 3$

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

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

$y = 4$

↓ sub ③

$x = 4y - 23$

$= 4(4) - 23$

$= 16 - 23$

$x = -7$

$(-7, 4)$

$(-7, 4)$

$$x + 7y = -1$$
$$2x - 2y = -2$$

$(-1, 0)$

$y = mx + b$

$-7y = -x - 1$

$\frac{-7y}{-7} = \frac{-x}{-7} - \frac{1}{-7}$

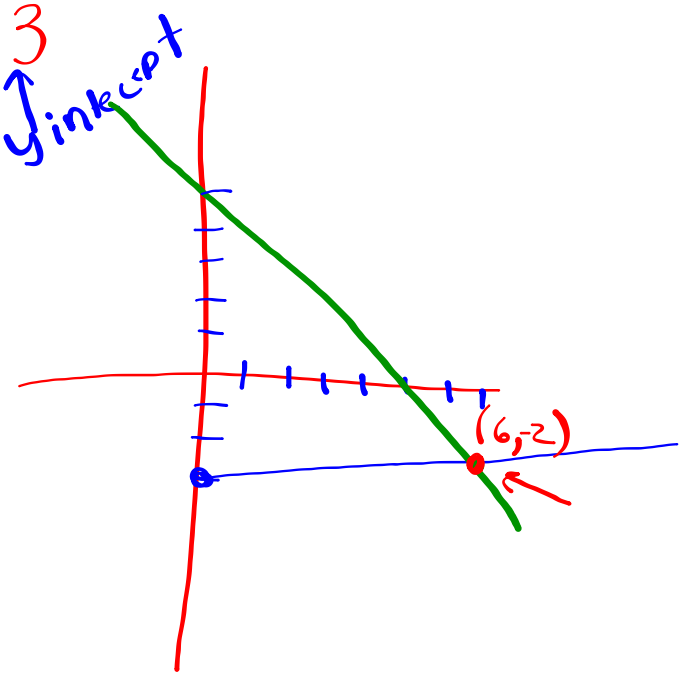
$y = \frac{1x}{7} + \frac{1}{7}$

m

y incept

$y = \frac{1^{rise}}{7^{run}}x - 3$ ← y-intercept

$y = -1x + 5$



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

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

Math 10 (Numbers Relations & Functions) Name_____

Elimination Did Dec . 21 & 22 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) $-5x + 10y = 5$
$10x - 4y = 6$

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

2) $-x + 4y = 7$
$x + 4y = 25$
$(9, 4)$

3) $-9x + 8y = 15$
$-9x + 6y = 27$
$(-7, -6)$

4) $-x - 5y = -3$
$-x + 3y = 13$
$(-7, 2)$

5) $-5x + 2y = 9$
$6x - 2y = -8$
$(1, 7)$

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

Elimination using Division

$x + 2y = 6$

$3x + 3y = -6$ → all divisible by 3

④ $1x + 1y = -2$

$x + 2y = 6$

① − ④ ⇒ $-x - y = 2$

$y = 8$

sub ①

$x + 2y = 6$

$x + 2(8) = 6$

$x + 16 = 6$

$-16 \quad -16$

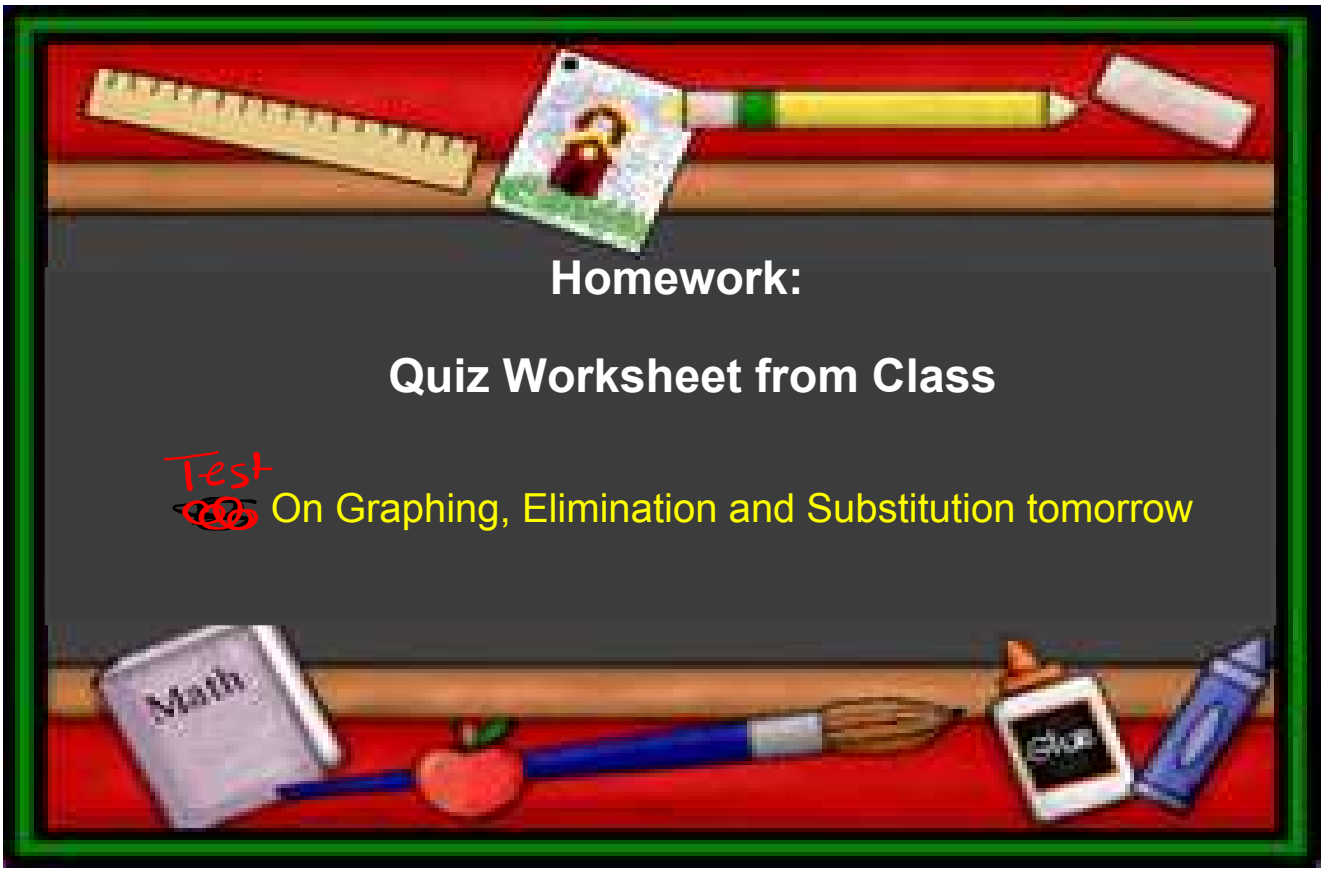
$x = -10$

Answer:

You try either way

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

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


Homework:
Quiz Worksheet from Class
Test
On Graphing, Elimination and Substitution tomorrow
Math

Elimination

Date_____

Solve each system by elimination.

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

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

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

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

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

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

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

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

$9x-18y=90$

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

$29x = 116$

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

$x=4$

$3x-6y=30$

$3(4)-6y=30$

$12-6y=30$

$-6y=18$

$y=-3$

15) $-10x + 7y = 12$
$-3x + 6y = -12$
$(-4, -4)$

16) $-3x + 4y = 2$
$-5x + 3y = 29$
$(-10, -7)$

17) $-10x - 6y = -14$
$8x + 5y = 11$
$(2, -1)$

18) $-3x - 2y = 8$
$-8x - 7y = 18$
$(-4, 2)$