1. Use elimination to solve the system of equations.

$5x + y = 9$

$+ \; 3x - y = 7$

$8x = 16$

(2, -1)

2. Use substitution to solve the systems of equations.

$y = (3x + 8)$

$5x + 2(y) = 5$

(-1, 5)

3. Solve the systems of equations by graphing.

$y - x = -1$

$x + y = 3$

(2, 1)

? ? ?

Questions

?

? on ? ?

?

?

Homework

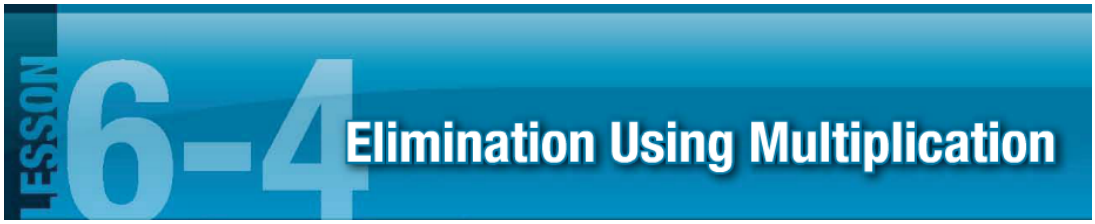
? ?

? ?

g be height of statue
b be height of building

$b + g = 326.6$

$b - g = 295.4$



I can... solve systems of equations by elimination and apply this to real world situations.

Elimination

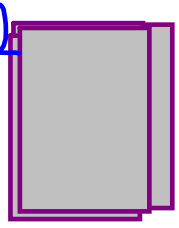
The process of getting rid of one variable by adding the two equations together.

Must have Additive Inverses!!

** Difference between 6.3 and 6.4 we will not be given additive inverses, we will have to create them**

Using Multiplication how can we create additive inverses for the following.

$5x$ (-1)	$-6y$	$7x$ (3)	$5x$ (-3)	$-3y$ (4)
$5x$	$2y$ (3)	$-3x$ (7)	$3x$ (5)	$-4y$ (-3)
$-5x$	$-6y$	$21x$	$-15x$	$-12y$
0	$6y$	$-21x$	$15x$	$12y$
	0	0	0	0



1. **Use elimination to solve the system of equations.**

(-2) (-2) (-2)

$2x + y = 23$

$3x + 2y = 37$

$-4x - 2y = -46$

$\frac{-x}{-1} = \frac{-9}{-1}$

$x = 9$

$2(9) + y = 23$

$18 + y = 23$

$-18 \quad -18$

$y = 5$

1. Line up x's and y's
2. Make additive inverses
3. Create big addition problem

(9, 5)

2. **Use elimination to solve the system of equations.**

(-2) (-2) (-2)

$7x + 4y = -4$

$5x + 8y = 28$

$-14x - 8y = 8$

+

(-4, 6)

You Try!!

Use elimination to solve the system of equations.

3. $2x - y = -1$

   $3x - 2y = 1$

4. **Use elimination to solve the system of equations.**

$4x + 3y = 8$

$3x - 5y = -23$

$(5)\quad (5)\quad (5)$

$20x + 15y = 40$

$(3)\quad (3)\quad (3)$

$+\ 9x - 15y = -69$

$29x + 0 = -29$

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

$x = -1$

$4(-1) + 3y = 8$

$-4 + 3y = 8$

$+4 \qquad +4$

$\frac{3y}{3} = \frac{12}{3}$

$y = 4$

$(-1, 4)$

Check

$3(-1) - 5(4) = -23$

$-3 - 20 = -23$ ✓

You Try!!

Use elimination to solve the system of equations.

5. $3x + 2y = 10$

$2x + 5y = 3$

6. $3x + 2y = -9$

$5x - 3y = 4$

7. 

FUNDRAISING For a school fundraiser, Marcus and Anisa participated in a walk-a-thon. In the morning, Marcus walked 11 miles and Anisa walked 13. Together they raised $523.50. After lunch, Marcus walked 14 miles and Anisa walked 13. In the afternoon they raised $586.50. How much did each raise per mile of the walk-a-thon?

Let x be $ per mile for Marcus
Let y be $ per mile for Anisa

$(-1)\ 11x + 13y = 523.50$
(-1)
$14x + 13y = 586.50$
$-11x - 13y = -523.50$

$\frac{3x}{3} = \frac{63.00}{3}$

$x = 21$

$11(21) + 13y = 523.50$
$231 + 13y = 523.5$
$-231 \quad -231$

$\frac{13y}{13} = \frac{292.5}{13}$

$y = 22.5$

Marcus makes $21/mile and Anisa makes $22.5/mile.

8. **FUNDRAISING** Benji and Joel are raising money for their class trip by selling gift wrapping paper. Benji raises $39 by selling 5 rolls of red wrapping paper and 2 rolls of foil wrapping paper. Joel raises $57 by selling 3 rolls of red wrapping paper and 6 rolls of foil wrapping paper. For how much are Benji and Joel selling each roll of red and foil wrapping paper?

9. **FUNDRAISING** Trisha and Byron are washing and vacuuming cars to raise money for a class trip. Trisha raised $38 washing 5 cars and vacuuming 4 cars. Byron raised $28 by washing 4 cars and vacuuming 2 cars. Find the amount they charged to wash a car and to vacuum a car.

DUE: 6.3 Bkpgs

Catering Equations, Graphed and solved using substitution.

Homework 6.4

Pg. 360

#7-20 all

Solve Catering Equations by Elimination

and Create a Scatter Plot for the Previous

Years Proms