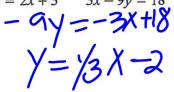


(-3,-3)



For 2 to 5, find the slope and y-intercept of each pair of lines then tell if the system of equations has ONE SOLUTION, NO SOLUTION, or MANY SOLUTIONS.

2. 
$$y = 8x + 7$$

$$8x - 2y = 14$$
  
 $-2y = -8x + 14$   
 $y = 4x - 7$ 

3. 
$$y = -6x + 5$$
  
 $18x + 3y = 15$  3y =  $-18X + 15$   
 $y = -6X + 5$   
 $y = -6X + 5$   
 $y = -6X + 5$ 

4. 
$$y = 2x + 7$$
  
 $y + 1 = 2(x - 3)$   $y + 1 = 2x - 6$   
 $y = 2x - 7$   
 $y = 3x - 7$   
 $y = 3x - 7$ 

5. 
$$y = 4x + 7$$
 one sol  $y = -\frac{1}{4}x + 9$ 

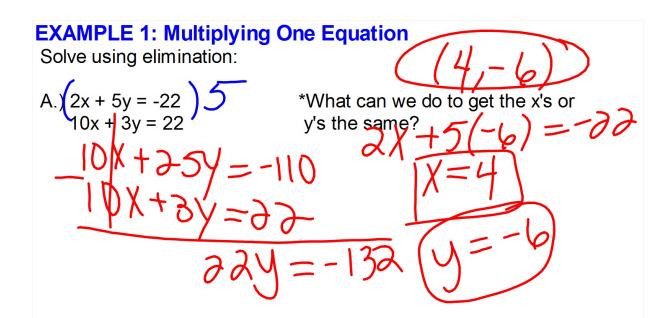
6. You are trying to decide between two health clubs to join. One club charges a \$98 sign-up fee then \$12 per month. The other club charges a \$50 sign up fee then \$15 per month. After how many months will the total charges for the two clubs be the same?

T= total 
$$M = 1000$$
 m =  $1000$  m =  $10000$  m =

## Sec 7-3: Solving systems of equations using ELIMINATION

## Solving by elimination may involve:

- Just adding or subtracting the two equations
- Multiplying one of the equations by a constant then adding or subtracting.
- Multiplying both equations by a constant then adding or subtracting.



B.) 
$$-2x + 15y = -32$$
 $(7x - 5y = 17)$ 
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## **EXAMPLE 2: Multiplying Both Equations**

Solve using elimination:

A.3 
$$(4x + 2y = 14)$$
  $+12x + 6y = 42$   
 $2(7x - 3y = -8)$   $+14x - 6y = -16$   
 $7(1) - 3y = -8$   $26x = 26$   
 $7 - 3y = -8$   $1 = 1$   $1 = 1$   
 $-3y = -15$   
 $y = 5$ 

B.)7(15x + 3y = 9)  

$$3(10x + 7y = -4)$$
  
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## **EXAMPLE 3: Using Any Method**

Solve. Which method would be most reasonable?

A.) 
$$5x - 6y = -32$$
  
 $3x + 6y = 48$ 

EXAMPLE 4: Real-World Problem Solving  A.) Suppose your community center sells a total of 292 tickets for a basketball game. An adult ticket costs \$3. Student tickets costs \$1. The sponsors collect \$470 in ticket sales. Write and solve a system to find the number of each type of ticket sold.
IXL #3 - U.10 & U.14 due Friday, Feb. 8th by 4pm!
HW #5 - Solving Systems of Equations Sheet
Quiz tomorrow over Sections 7.1-7.3. Make sure to look over story problems from the guided notes.