

## Homework Review Sets:

Name: \_\_\_\_\_

Work must be shown on your own notebook paper. Label each set and number each problem.

### Set A

1. Simplify:  $7 - 3(8 - 2) + 6 \div 2$
2. Solve for  $n$ :  $5(n - 5) + 37 = 4(n - 1)$
3. Solve for  $x$ :  $9(2x - 1) + x = 3(6x - 3)$
4. Solve for  $y$ :  $2(y + 3) - 12 = 5y$
5. Solve for  $p$ :  $5(2p + 7) - p = 3(3p + 1)$
6. The length of a rectangle is 3 cm more than twice the width. If the perimeter is 48 cm, find the dimensions of the rectangle.

### Set B

1. Simplify:  $10 - 2(6 - 13) + 12 \div 4$
2. Solve for  $n$ :  $2(3n - 5) + 20 = 4(n - 8)$
3. Solve for  $x$ :  $5(6x - 10) - 4x = -2(7x - 4) + 22$
4. Solve for  $y$ :  $7(y + 8) - 12 = 8y$
5. Solve for  $p$ :  $2(3p + 13) - 3p = 4(2p + 4)$
6. The length of a rectangle is 6 cm more than three times the width. If the perimeter is 52 cm, find the dimensions of the rectangle.

### Set C

1. Simplify:  $-8 - 5(6 - 4) + 18 \div 9$
2. Solve for  $n$ :  $4(n - 2) + 16 = -2(n - 1)$
3. Solve for  $x$ :  $6(-3x - 4) + 2x = 3(4x - 2)$
4. The length of a rectangle is 6 cm less than twice the width. If the perimeter is 36 cm, find the dimensions of the rectangle.
5. Solve using an equation: Matt is four times as old as Maxine. If the sum of their ages is 20, how old is each?
6. Find the slope of the line containing the points  $(-4, 2)$  and  $(-1, 7)$ .

### Set D

1. Simplify:  $-8 - 2(3 - 6) + 16 \div 4$
2. Solve for  $p$ :  $3(4p + 7) - 2p = 2(5p + 1) + 19$
3. The length of a rectangle is 5 cm less than twice the width. If the perimeter is 158 cm, find the dimensions of the rectangle.
4. Solve using an equation: Connor is three times as old as Katie. If the sum of their ages is 48, how old is each?
5. Find the slope of the line containing the points  $(-6, 2)$  and  $(-3, -8)$ .
6. Find the equation of the line through  $(10, -22)$  with a slope of  $-3$ .

### Set E

1. Solve for  $y$ :  $-2(y + 6) - 21 = -5y$
2. Solve for  $p$ :  $8(2p + 5) - 2p = 4(p + 6)$
3. The length of a rectangle is 5 cm more than twice the width. If the perimeter is 82 cm, find the dimensions of the rectangle.
4. Solve using an equation: Will is six times as old as Ryan. If the sum of their ages is 28, how old is each?
5. Find the slope of the line containing the points  $(4, -5)$  and  $(-8, -9)$ .
6. Find the equation of the line through  $(6, -9)$  with a slope of  $\frac{1}{2}$ .

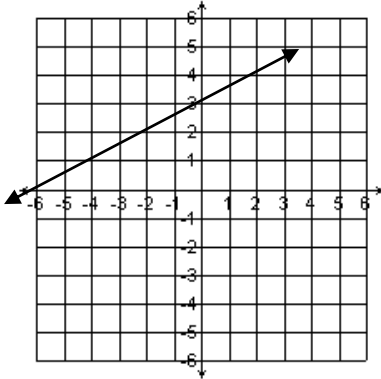
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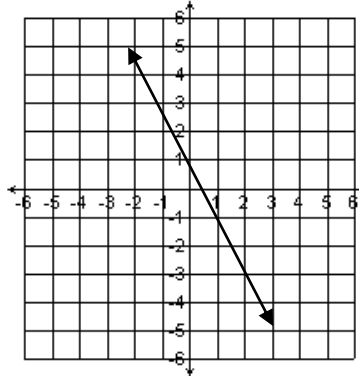
**Set F**

1. Find the equation of this line:
2. Graph the line  $3x - 4y = 12$ .
3. Find the slope of the line containing the points  $(-4, 2)$  and  $(-1, 7)$ .
4. Solve:  $x + 2y = 20$   
 $2x - y = 5$
5. Write the equation of the line through  $(-6, 4)$  with a slope of 13.
6. A souvenir vendor will sell four T-shirts and three hats for \$38.00. He will sell three T-shirts and five hats for \$50.50. What is the cost of each single item?



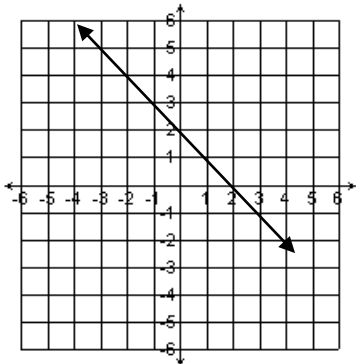
**Set G**

1. Find the equation of this line:
2. Graph the line  $12x - 4y = -24$ .
3. Solve:  $x + y = 60$   
 $x - 3y = -8$
4. Solve:  $x + 3y = 11$   
 $2x - y = 1$
- 5) A souvenir vendor will sell three T-shirts and four hats for \$27.00. He will sell four T-shirts and five hats for \$35.00. What is the cost of each single item?
- 6) The length of a rectangle is 3 cm less than twice the width. If the perimeter is 54 cm, find the dimensions of the rectangle.



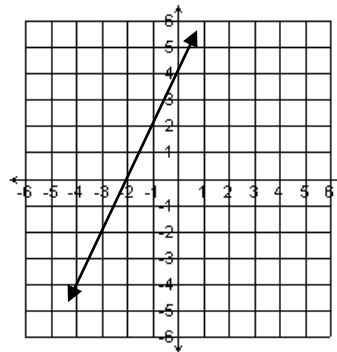
**Set H**

1. Find the equation of this line:
2. Graph the line  $5x - 2y = 6$ .
3. Solve:  $x = 2y - 3$   
 $3x - 2y = -8$
4. Find the slope of the line containing  $(-2, 4)$  &  $(-8, -6)$
5. Solve using an equation: George is four more than three times as old as Meredith. If the sum of their ages is 24, how old is each?
6. Write the equation of the line through  $(2, -2)$  and  $(-1, -11)$ .



**Set I**

1. Find the equation of this line:
2. Graph the line  $-x + 3y = 6$ .
3. Solve:  $x + 5y = 9$   
 $3x - 2y = 10$
4. Solve for x:  
 $2(3x - 1) + x = 5(2 - x)$
5. The length of a rectangle is 5 cm less than three times the width. If the perimeter is 70 cm, find the dimensions of the rectangle.
6. Write the equation of the line through  $(-6, -1)$  with a slope of  $-\frac{4}{3}$ .



**Set J**

1. Solve:  $x + y = 15$   
 $8x - 5y = 68$
2. Solve:  $x + y = 2$   
 $x - 2y = -10$
3. Simplify.  
 $15 + 5(2 - 7) - 10 \div 5$
4. Solve using a system of equations: A souvenir vendor will sell two T-shirts and seven hats for \$30.00. He will sell four T-shirts and five hats for \$42.00. What is the cost of each single item?
5. Solve using an equation: James is two years more than five times as old as Maddie. If the sum of their ages is 20, how old is each?
6. Find the equation of the line through  $(-4, 3)$  with a slope of  $\frac{5}{2}$ .

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**Set K**

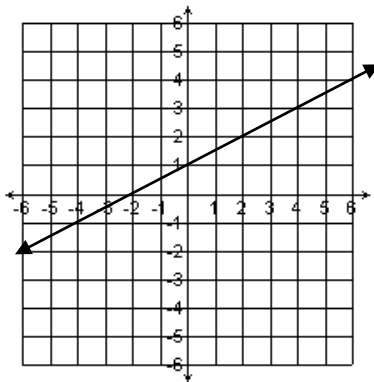
- 1) Solve and graph on a number line:  $3 - 6x < 18 - 3x$
- 2) Solve and graph on a number line:  $2 < 5 - x \leq 7$
- 3) Solve and graph on a number line:  $x - 6 < 8$  or  $x + 6 > 25$
- 4) Simplify:  $\frac{36x^5y^3z}{20xz^2}$
- 5) Perform the indicated operation and simplify:  
 $(3x^2 - 5x - 6) - (5 - 7x^2 + x)$
- 6) Perform the indicated operation and simplify:  
 $(x^2 + x - 2) + (3x - 7x^3 + 2)$

**Set L**

- 1) Solve and graph on a number line:  $4 - \frac{2}{3}x \geq 16$
- 2) Solve and graph on a number line:  $3 < 17 - 2x \leq 9$
- 3) Solve and graph on a number line:  $\frac{x}{2} - 4 > 12$  or  $2x - 1 \leq 7$
- 4) Simplify:  $\frac{-24x^6y^2}{16xyz^4}$
- 5) Perform the indicated operation and simplify:  
 $(3x^2 - 5x - 6) + (5 - 7x^2 + x)$
- 6) Perform the indicated operation and simplify:  
 $(x^2 + x - 2) - (3x - 7x^3 + 2)$

**Set M**

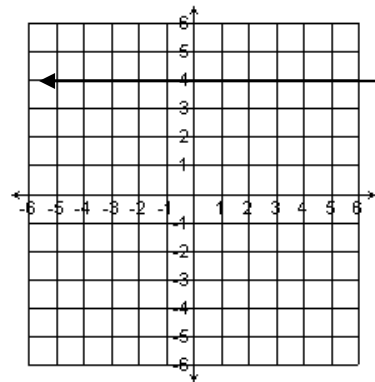
1. Write the equation of this line:
2. Graph the line  $y = 2x - 4$ .
3. Solve this system:  
 $x = 2y + 3$   
 $-6y + 5x = 15 + 4y$
4. Simplify.  
 $(-2x^3y^4)(-3x^5y)$



5. Emily has 21 quarters and dimes worth \$3.00. How many of each type of coin does she have?
6. 150 adults and children attend a play costing a total of \$510. How many children and how many adults attended if children cost \$3, and adults cost \$5?

**Set N**

1. Write the equation of this line:
2. Graph the line  $y = x$ .
3. Simplify:  $\frac{56x^8y^2z}{35xy^2z^2}$
4. Perform the indicated operation and simplify:  
 $(2x^2 + x - 2) - (x^2 - 4x + 2)$



5. Write the equation of the line through points (4, -6) and (-6, -11)
6. Akira has 55 quarters and nickels worth \$7.75. How many of each type of coin does she have?

**Set O**

- 1) Solve and graph on a number line:  $7 - \frac{2}{5}x \geq 13$
- 2) Solve and graph on a number line:  $-8 < 10 - x \leq -5$
- 3) Solve using an equation: A baseball team played 109 games. It lost five more games than it won. How many games did it win?
- 4) Simplify:  $\frac{54x^8y^2}{36x^5y^7z}$
- 5) Perform the indicated operation and simplify:  $(-4x^2 - 2x - 5) - (7 - 3x^2 + x)$
- 6) One number is 8 more than twice the second number. The sum of the numbers is 123. Find the numbers.

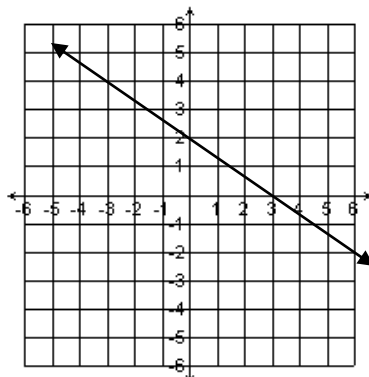
## Homework Review Sets:

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### Set P

1. Write the equation of this line:  
 $2x - y = -5$



2. Graph the line  
 $2x - y = -5$
3. Solve the system using any method:  
 $x + 3y = 20$   
 $2x - y = 5$

4. Simplify:  $\frac{18x^6y^4z}{45x^2z^4}$

5. Simplify:  $4 - 2(5 - 3) + 8 \div 2$

6. Solve using an equation: JJ is five more than three times Andrew's age. If the sum of their ages is 29, how old is each?

### Set Q

1. Solve for  $n$ :  $5(n - 3) + 31 = 6(n - 2)$

2. Find the slope of the line containing the points  $(-6, 2)$  and  $(-1, 7)$ .

3. Solve:  
 $x + y = 35$   
 $x - 5y = 17$

4. Solve and graph on a number line:  $6 - 3x < 4 - x$

5. Solve using an equation: The length of a rectangle is five less than three times the width. The perimeter of the rectangle is 94 inches. What are the dimensions?

6. Simplify:  $\frac{-24x^8y^8z}{36x^2y^7z^3}$

### Set R

1. Solve for  $y$ :  $3(y + 3) - 12 = 5y$

2. Find the equation of the line through  $(10, -4)$  with a slope of  $\frac{3}{5}$ .

3. Perform the indicated operation and simplify:  
 $(5x^2 - 4x - 3) - (2 - x^2 + x)$

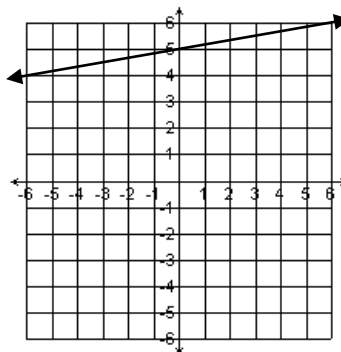
4. Solve using a system of equations: Juliet has 64 coins worth \$4.50. All of her coins are dimes and nickels. How many of each does she have?

5. Solve using a system of equations: If Ben purchases 5 cheeseburgers and 8 orders of french-fries, the total is \$23.25. If Ben purchases 3 cheeseburgers and 6 orders of french-fries, the total is \$15.75. How much is a single cheeseburger with one order of french-fries?

6. Solve and graph on a number line:  
 $-8 < 2y - 12 < 10$

### Set S

1. Write the equation of this line:  
 $2y + 6 = x$



2. Graph the line  
 $2y + 6 = x$

3. Solve:  $x = -3y + 3$   
 $-2x + 3y = -9$

4. Simplify:  $\frac{-56xy^5z}{-32x^3y^7z^6}$

5. The length of a rectangle is 5 cm more than twice the width. If the perimeter is 100 m, find the dimensions of the rectangle.

6. Solve using a system of equations: Victoria has 29 coins worth \$6.65. All of her coins are dimes and quarters. How many of each does she have?

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**Set T**

- 1) Solve and graph on a number line:  $-2x + 5 \leq -11$
- 2) The length of a rectangle is one less than five times the width. The perimeter of the rectangle is 118cm. What are the dimensions?
- 3) Simplify:  $-3x^2y(-2x^3y^3)(-xy^2)$
- 4) Simplify:  $\frac{42x^4y^8z}{48xy^3z^5}$
- 5) Perform the indicated operation and simplify:  
 $(2x^2 - 4x - 10) - (-3 - 8x^2 + 2x)$
- 6) Solve using an equation: There are 10 more boys than girls in the class. If there are 32 students in the class, how many are boys?

**Set U**

- 1) Olivia is one year less than twice as old as Mia. If the sum of their ages is 23, how old is each?
- 2) Solve and graph on a number line:  $-10 < 4 + \frac{2}{5}x \leq 8$
- 3) Simplify:  $-3x^2y(-2x^3y^3 - xy^2 + 4)$
- 4) Find the slope of the line through (-2, 8) and (-6, -14)
- 5) Perform the indicated operation and simplify:  
 $(3x^2 - 5x - 6) + (5 - 7x^2 + x)$
- 6) The Jones brothers had 35 coins that were all quarters and dimes. Their savings totaled \$6.50. How many of each type of coin did they have?

**Set V**

1. Write the equation of this line:
- 
2. Graph the line  $y = -2x + 5$ .
  3. Solve this system:  
 $x = -2y + 3$   
 $-4y + 5x = 1$
  4. Simplify:  $\frac{10x^4y^4z^4}{35xy^4z^5}$
  5. The length of a rectangle is six more than twice the width. The perimeter of the rectangle is 90ft. What are the dimensions?
  6. The Ice cream store sold 20 milkshakes and 10 ice cream cones for a total of \$50. Ten milkshakes and 25 ice cream cones totaled \$55.00. How much do they charge for each?

**Set W**

1. Write the equation of this line:
- 
2. Graph the line  $y = 3$ .
  3. Write the equation of the line through points (5, -1) and (-10, -7)
  4. Perform the indicated operation and simplify:  
 $(2x^2 + x - 6) - (5x^2 + 3x - 6)$
  5. The entrance fee to the museum is \$5 for children and \$8 for adults. If a total of 275 tickets were sold for an income of \$1825, how many of each type of ticket were sold?
  6. At a ballgame, the spirit club was selling balloons and shakers. One night they made \$60 by selling 20 balloons and 15 shakers. Another night, they made \$72.50 by selling 15 balloons and 25 shakers. How much did they sell each item for?

**Set X**

- 1) Simplify:  $15 - 3(5 - 2) + 9 \div 3$
- 2) Solve for y:  $5(y + 3) - 7 = 9y$
- 3) Solve the system using any method:  
 $x + 4y = 9$   
 $2x - y = 0$
- 4) Solve and graph on a number line:  
 $13 \geq -5 - \frac{2}{3}x \geq 1$
- 5) One number is fifteen less than ten times another number. The sum of the numbers is 128. Find the numbers.
- 6) The length of a rectangle is eight less than three times the width. The perimeter of the rectangle is 32inches. What are the dimensions?

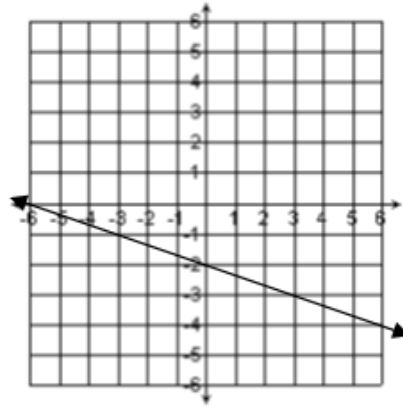
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### Set Y

- Simplify:  $5 - 2(9 - 3) + 8 \div 4$
- Solve for n:  $3(n - 3) + 23 = 2(n - 5)$
- Solve using an equation: The length of a rectangle is 5 less than three times the width. The perimeter is 110 cm. Find the dimensions of the rectangle.
- Graph the line,  
 $3x - 2y = 8$
- Write the equation of the line graphed to the right.
- Solve the system using any method:  
 $x + 2y = -5$   
 $2x - y = 10$
- One number is 7 more than three times the second number. The sum of the numbers is -13. Find the numbers.
- Solve **and** graph on a number line:  $72 - 8x < 24 - 2x$
- Simplify  $\frac{-36a^2b^2c^4}{4abc^3}$
- Perform the indicated operation and simplify:  
 $(9x - 4)(6x - 5)$
- Factor completely:  $3x^2 - 11x - 4$
- Solve for x:  $x^2 - 10x + 9 = 0$

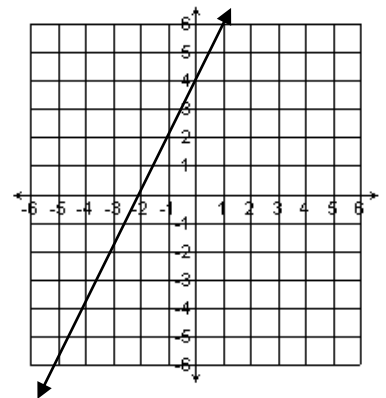


### Set Z

- Solve for k:  $5 - 2(k + 2) = 9$
- Solve for n:  $6 - (8 - 4n) = 2(2n - 1)$
- Solve using an equation: Camelia is twice as old as Emily. If the sum of their ages is 57, how old is each?
- Find the slope of the line containing the points (-5, -1) and (-2, -4).
- Find the equation of the line through (-9, 2) with a slope of  $\frac{1}{3}$ .
- Solve:  
 $y = 4x - 2$   
 $x - 4y = 2$
- A restaurant owner bought 24 new tables, some large and some smaller. The large tables cost \$145 each, while the smaller ones cost \$120 each. The total cost of the tables was \$3080. How many tables of each size were purchased?
- Solve **and** graph on a number line:  
 $-9 < -2x - 3 \leq -1$
- Perform the indicated operation and simplify:  
 $(3x^2 - 5 - 7x) - (8x^2 - 9 + 2x)$
- Factor completely:  $25x^2 - 64$
- Factor completely:  $x^3 - 5x^2 - 14x$
- Solve for r:  $8r^2 - 19r = -6$

### Set AA

- Simplify:  $9 - 2(-7 + 2) - 12 \div 6$
- Solve for n:  $36 - 2(n - 28) = -4(2n + 52)$
- Solve using an equation: The length of a rectangle is twice the width. The perimeter is 90m more than the width. Find the dimensions of the rectangle.
- Solve the system using any method:  
 $-3x - y = -10$   
 $2x + y = 15$
- One number is 12 more than twice the second number. The sum of the numbers is 75. Find the numbers.
- Graph the line,  $-2x - 3y = 12$ .
- Find the equation of the line to the right...
- Solve **and** graph on a number line:  
 $6y - 9 \leq 17y + 13$
- Simplify  $\frac{-24a^4b^2c^5}{18ab^4c^6}$
- Perform the indicated operation and simplify:  
 $(2x + 4)(x - 8)$



- Factor completely:  
 $5x^2 - 42x - 27$
- Solve for x:  $x^2 + 5x - 24 = 0$

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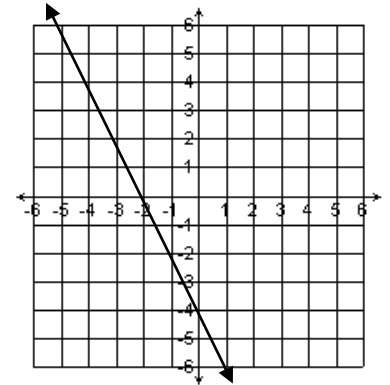
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- Solve for k:  $18 - 5(k + 4) = 13$
- Solve for  $n$ :  $-4(n + 2) = -6n + 2$
- Solve using an equation: Connor is 15 less than 3 times as old as Zach. If the sum of their ages is 41, how old is each?
- Find the slope of the line containing the points  $(-5, 1)$  and  $(-6, -3)$ .
- Find the equation of the line through  $(-2, 1)$  with a slope of 3.
- Solve:  $x = 2y - 4$   
 $5x - 3y = 1$
- The Lawn and Garden Shop sold 40 bags of lawn seed one week for a total of \$263. Large bags of lawn seed sell for \$8.50 and smaller bags for \$5.75 each. How many bags of each size were sold?
- Solve **and** graph on a number line:  
 $-19 \leq 5m - 4 < -4$
- Perform the indicated operation and simplify:  
 $(5x^2 - 8 - 2x) + (3x^2 - 4 + 2x)$
- Factor completely:  $100x^2 - 81$
- Factor completely:  $x^3 + 16x^2 + 64x$
- Solve for r:  $6r^2 + 7r = -2$

### Set CC

- Simplify:  $7 - 4(3 - 8) + 27 \div 3$
- Solve for n:  $8(n - 2) + 10 = 5(n - 3)$
- Solve using an equation: The length of a rectangle is three times the width. The perimeter is 55cm more than the length. Find the dimensions of the rectangle.
- Graph the line,  
 $x = -9 + 3y$
- Write the equation of the line graphed to the right.
- Solve the system using any method:  
 $2x + y = 3$   
 $7x - 4y = 18$
- One number is 6 less than five times the second number. The sum of the numbers is 72. Find the numbers.
- Solve **and** graph on a number line:  $3 - 2n < n$
- Simplify  $\frac{-48a^3b^4c^2}{66ab^4c^3}$
- Perform the indicated operation and simplify:  
 $(7x + 2)(4x - 8)$
- Factor completely:  $12x^2 + 17x + 6$
- Solve for x:  $x^2 + 6x - 72 = 0$



### Set DD

- Solve for k:  $-5 - 2(k - 6) = -3$
- Solve for  $n$ :  $-3(n - 7) = -8n - 29$
- Solve using an equation: Gavin is 6 more than 3 times as old as Dominic. If the sum of their ages is 58, how old is each?
- Find the slope of the line containing the points  $(-8, 1)$  and  $(6, -3)$ .
- Find the equation of the line through  $(10, -6)$  with a slope of  $\frac{2}{5}$ .
- Solve:  $4x + 3y = -2$   
 $8x - 2y = 12$
- A total of 7500 tickets were sold for a concert. Total receipts amounted to \$45,000. Tickets sold for \$5.50 and \$7.00. How many of each type were sold?
- Solve **and** graph on a number line:  
 $-16 \leq \frac{2}{5}m - 2 < 8$
- Perform the indicated operation and simplify:  
 $(5x^2 - 10 + 2x) - (6x^2 - 5x + 8)$
- Factor completely:  $x^2 - 81$
- Factor completely:  $x^3 - 6x^2 - 16x$
- Solve for r:  $8r^2 - 10r = -3$

