

**3.2.D2 – STANDARD FORM OF LINEAR EQUATIONS**

Define variables and write an expression to represent each situation. Refer to the 3.2 example “Writing & Solving a Function in Two Variables” in the Chapter 3 Summary.

1. A movie theater sells tickets for matinee showings for \$7.00 and evening showings for \$10.50. Write an expression that represents the total amount the theater can earn selling tickets.

Let  $x =$  \_\_\_\_\_ &  $y =$  \_\_\_\_\_

Expression: \_\_\_\_\_

2. A bakery sells muffins for \$1.25 each and scones for \$1.75 each. Write an expression that represents the total amount the bakery can earn selling muffins and scones.

Let  $x =$  \_\_\_\_\_ &  $y =$  \_\_\_\_\_

Expression: \_\_\_\_\_

Define variables and write an equation to represent each situation. Refer to the 3.2 example “Writing & Solving a Function in Two Variables” in the Chapter 3 Summary.

3. A farmer’s market sells oranges for \$0.79 per pound and peaches for \$1.05 per pound. The farmer’s market hopes to earn \$325 each day from these sales. Write an equation to represent the total amount the farmer’s market would like to earn selling oranges and peaches each day.

Let  $x =$  \_\_\_\_\_ &  $y =$  \_\_\_\_\_

Equation: \_\_\_\_\_

4. The high school soccer booster club sells tickets to the varsity matches for \$4 for students and \$8 for adults. The booster club hopes to earn \$200 at each match. Write an equation to represent the total amount the booster club would like to earn from ticket sales at each match.

Let  $x =$  \_\_\_\_\_ &  $y =$  \_\_\_\_\_

Equation: \_\_\_\_\_

The basketball booster club runs the concession stand during a weekend tournament. They sell hamburgers for \$2.50 each and hot dogs for \$1.50 each. They hope to earn \$900 during the tournament. The equation  $2.50b + 1.50h = 900$  represents the total amount the booster club hopes to earn. Use this equation to determine each unknown value.

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|--|--|
| 5. If the booster club sells 315 hamburgers during the tournament, how many hot dogs must they sell to reach their goal? | 6. If the booster club sells 420 hot dogs during the tournament, how many hamburgers must they sell to reach their goal? |
|--|--|

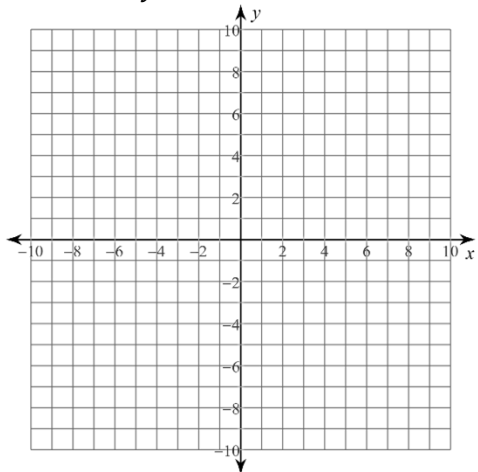
Determine the  $x$ -intercept and the  $y$ -intercept of each equation. Refer to the 3.2 example “Identify the  $x$ -Intercept and  $y$ -Intercept of an Equation w/Two Variables” in the Chapter 3 Summary.

7.  $20x + 8y = 240$

8.  $y = 8x + 168$

Determine the  $x$ -intercept and  $y$ -intercept. Then graph the equation. Refer to the 3.2 examples “Identify the  $x$ -Intercept and  $y$ -Intercept of an Equation w/Two Variables” and “Rewriting an Equation w/Two Variables to Solve for One Variable” in the Chapter 3 Summary.

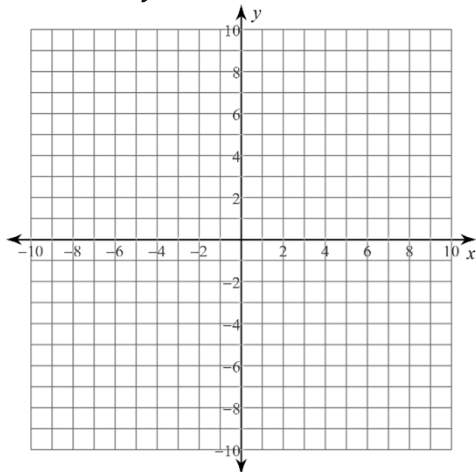
9.  $12x - 9y = 36$



$x$ -int: \_\_\_\_\_

$y$ -int: \_\_\_\_\_

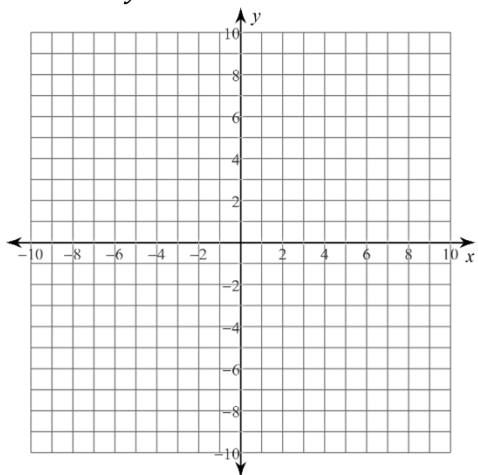
10.  $3x + 4y = -12$



$x$ -int: \_\_\_\_\_

$y$ -int: \_\_\_\_\_

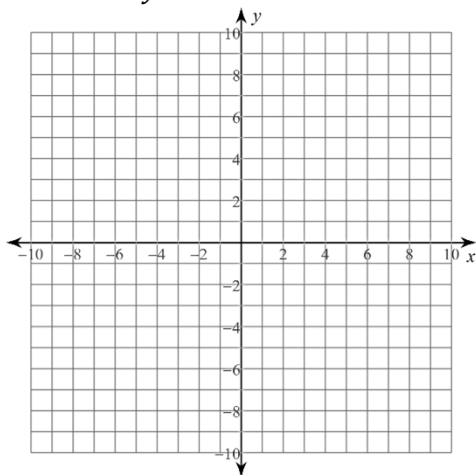
11.  $x + 5y = 10$



$x$ -int: \_\_\_\_\_

$y$ -int: \_\_\_\_\_

12.  $3x - 5y = -15$

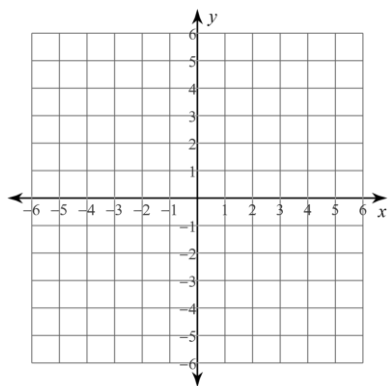


$x$ -int: \_\_\_\_\_

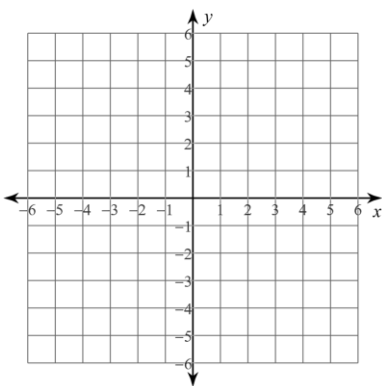
$y$ -int: \_\_\_\_\_

Graph a line with the given intercepts.

13.  $x$ -intercept: 3  
 $y$ -intercept: 5



14.  $x$ -intercept: -1  
 $y$ -intercept: -4



15.  $x$ -intercept: 4  
 $y$ -intercept: -3

