

3.3.D2 - LITERAL EQUATIONS

Past due on: _____ Period: _____

Determine the x -intercept and the y -intercept of each equation. Then convert each equation from standard form to slope-intercept form and identify the slope. Refer to the 3.2 example "Identify the x -Intercept and y -Intercept of an Equation w/Two Variables" and the 3.3 example "Converting Equations between Standard Form and Slope-Intercept Form" in the Chapter 3 Summary.

1. $-x - 8y = 96$ x -intercept: _____ y -intercept: _____ Slope: _____

2. $12x + 28y = -84$ x -intercept: _____ y -intercept: _____ Slope: _____

Convert to standard form.

3. $y = -\frac{1}{2}x + \frac{3}{4}$ x -intercept: _____ y -intercept: _____ Slope: _____

Solve each equation for the variable indicated. Refer to the 3.3 example "Converting Literal Equations to Solve for a Specific Variable" in the Chapter 3 Summary.

4. The formula for the area of a triangle is given. Solve the equation for h . 5. The formula for the volume of a pyramid is given. Solve the equation for w .

$$A = \frac{1}{2}bh$$

$$V = \frac{1}{3}lwh$$

6. The formula for the circumference of a circle is given. Solve the equation for r . 7. The formula for the sum of the interior angles of a polygon is given. Solve the equation for n .

$$C = 2\pi r$$

$$S = 180(n - 2)$$

8. A hiker has been hiking for a week and will continue to hike for several more days. The formula for the total distance that he will hike is $D = d + rt$. Solve the equation for t .

Problems 9 & 10: 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. Refer to the 3.2 example “Writing & Solving a Function in Two Variables” in the Chapter 3 Summary.

9. If the booster club sells 281 hamburgers during the tournament, how many hot dogs must they sell to reach their goal?
10. If the booster club sells 0 hot dogs during the tournament, how many hamburgers must they sell to reach their goal?

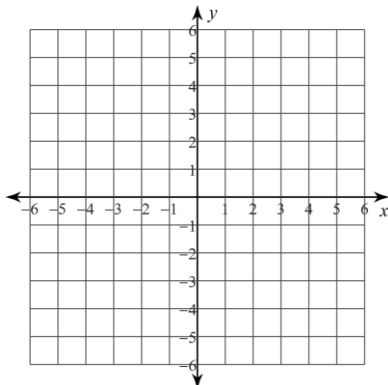
Problems 11 – 13: Refer to the 2.2 examples, “Identifying & Describing the Parts of a Linear Function” and “Comparing Tables, Equations, and Graphs to Model & Solve Linear Equations” in the Chapter 2 Summary.

One subsidiary of a company makes and sells widgets. The subsidiary sells the widgets for \$4 each and adds a \$9 shipping charge to cost of an order.

11. Write an equation that gives the total cost of an order, C , in dollars, in terms of the number of widgets, x .
12. Use your equation to find the total cost of an order of 257 widgets.
13. Use your equation to find the number of widgets that can be ordered for \$89.

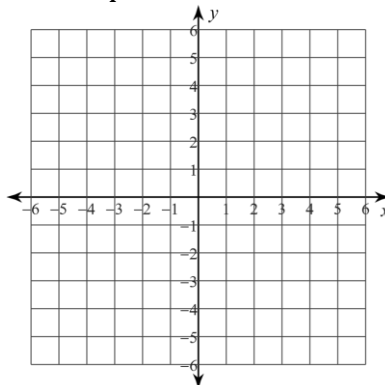
Determine the x -intercept and y -intercept. Then graph the equation. Refer to the 3.2 examples “Identify the x -Intercept and y -Intercept of an Equation w/Two Variables” and “Rewriting an Equation w/Two Variables to Solve for One Variable” in the Chapter 3 Summary.

14. $y = -2x + 3$



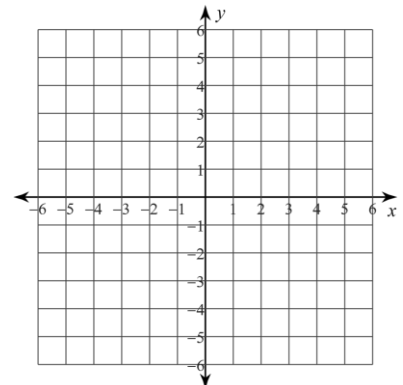
x -int: _____ y -int: _____

15. $y = \frac{1}{4}x - 1$



x -int: _____ y -int: _____

16. $-x + 2y = 3$



x -int: _____ y -int: _____