

LESSON **3.3** Assignment

Name _____ Date _____

Cool As A Cucumber or Hot Like A Tamale!
Literal Equations in Standard Form and Slope-Intercept Form

1. Shoe sizes vary from country to country. In the USA the shoe sizes for men are approximated by the equation $s = 3f - 24$. This represents the relationship between shoe size, s , and length of the foot in inches, f .
 - a. The average man's foot is 11.5 inches long. What is the average man's shoe size?



- b. Use the function to determine the y -intercept. State the meaning of the y -intercept in terms of this problem situation.

- c. Use the function to determine the x -intercept. State the meaning of the x -intercept in terms of this problem situation.

- d. Which form can most easily be used to determine the slope of this equation? What is the slope of this equation? What does it mean in terms of this problem situation?

2. The boxes that shoes come in are often used in other capacities once the shopper has bought the shoes. Sometimes students use the boxes to create models by covering the outside of the shoe box with construction paper. In order to cover all the sides, it is helpful to know the perimeter of the box, or the distance around the box.

a. Write the equation to solve for perimeter.

b. If the length of a box is 12 inches and the width is 8 inches, what is the perimeter of the box?



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c. Convert the equation to solve for height. Show your work.

d. A box has a perimeter of 50 inches and a length of 15 inches. Determine the height of the box.