
 NAME _____

Module 9 Using Functions
Lesson 5 Solving Problems Using Functions



**guided
practice**

Set 1

1. Write an equation for the function that can be used to find the volume of a shed that is in the shape of a cube. Use the function to find the volume of a cube-shaped shed with a side of length eight feet.

$$V(s) = s^3, V(8) = 512 \text{ ft}^3$$

2. Roxy opened a bank account and deposited \$100. She plans to deposit \$10 every month and make no withdrawals. Write an equation for the function that describes how much money Roxy will have deposited in her account after x months.

$$f(x) = 10x + 100$$

3. Use the function, $f(x) = 10x + 100$, to find out how much money was deposited in Roxy's account after 8 months.

$$f(8) = 180$$

4. Write an equation for the function that describes how many minutes are left on a game clock in a one-hour football game after x minutes of play. Use the function to find out how much time is left after 16 minutes of play.

$$f(x) = 60 - x, f(16) = 44$$

Set 2

1. The amount of money Pogans Plumbers charge for a house call can be described by a linear function. The charge for a one-hour job is \$85. The charge for a two-hour job is \$125. Write the equation for the function and use the function to find the cost of a three-hour job.

$$f(x) = 40x + 45, f(3) = 165$$

2. Scuba divers can use a linear function to determine their depth using the water pressure. If the water pressure is 2 atmospheres, the depth of the ocean is 33 feet. If the water pressure is 3 atmospheres, the depth of the ocean is 66 feet. Use a linear function to find the depth of the water if the water pressure is 5 atmospheres.

$$f(x) = 33x - 33, f(5) = 132$$

