

NAME _____

DATE _____

Module 9 Using Functions
Lesson 5 Solving Problems Using Functions

additional practice

Solve.

1a. Write an equation for the function that can be used to find the volume of a shed with a square floor, and a height of 10 feet.

2a. Write an equation for the function that can be used to find the number of light bulbs in p packages, if each package contains four light bulbs.

3a. Write an equation for the function that can be used to find the number of cans of paint needed to paint four walls and the ceiling of a cube-shaped room x feet long. Each can of paint covers 100 square feet.

4a. Newt opened a checking account with a \$500 deposit. Each month, he withdraws \$20. Write a function to show Newt's balance after m months.

5a. A piano teacher started with two students. At the end of each year, he takes on three additional students. Write a function to show the number of students the piano teacher has after r years.

1b. Use the function from exercise 1a to find the volume of a shed with a floor whose length is nine feet.

2b. Use the function from exercise 2a to find the number of light bulbs included in seven packages.

3b. Use the function from exercise 3a to find the number of cans of paint needed if the cube-shaped room is 10 feet long.

4b. Use the function from exercise 4a to find Newt's balance after 12 months.

5b. Use the function from exercise 5a to determine when the teacher will have 26 students.

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6a. Write a function to show the number of cards remaining in a 52-card deck after d cards have been dealt.

7a. Write a function to show the number of eggs remaining in a crate of 144 eggs after x 3-egg omelets have been made.

8a. The cost of a long-distance phone call can be described by a linear equation. A 10-minute phone call costs \$0.70. A 15-minute phone call costs \$0.95. Write the equation for the function.

9a. The cost of purchasing and operating a refrigerator can be described by a linear function. It costs \$357 to purchase and operate the refrigerator for four months, and \$373 for 6 months. Write a linear function to show the cost of purchasing and operating the refrigerator for m months.

10a. The cost of developing the pictures on a roll of film at FastPix can be described by a linear function. It costs \$4.60 to develop 13 pictures, and \$5.60 to develop 18 pictures. Write a linear function to show the cost of developing a roll of film containing p pictures.

6b. Use the function from exercise 6a to determine the number of cards remaining after 27 cards have been dealt.

7b. Use the function from exercise 7a to determine how many 3-egg omelets can be made if 20 eggs must be reserved for other uses.

8b. Use the function from exercise 8a to determine the cost of a 5-minute phone call.

9b. Use the function from exercise 9a to determine the cost of purchasing and operating the refrigerator for two years.

10b. Use the function from exercise 10a to determine the cost of developing a roll of film containing 21 pictures.

