



Practice and Problem-Solving Exercises



A Practice

Write a function rule that represents each sentence.

← See Problem 1.

8. y is 5 less than the product of 4 and x .
9. C is 8 more than half of n .
10. 7 less than three fifths of b is a .
11. 2.5 more than the quotient of h and 3 is w .

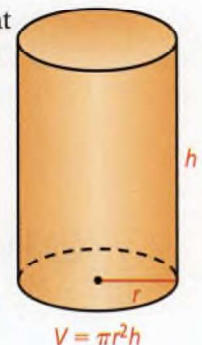
Write a function rule that represents each situation.

12. **Wages** A worker's earnings e are a function of the number of hours n worked at a rate of \$8.75 per hour.
13. **Pizza** The price p of a pizza is \$6.95 plus \$.95 for each topping t on the pizza.
14. **Weight Loads** The load L , in pounds, of a wheelbarrow is the sum of its own 42-lb weight and the weight of the bricks that it carries, as shown at the right.
15. **Baking** The almond extract a remaining in an 8-oz bottle decreases by $\frac{1}{6}$ oz for each batch b of waffle cookies made.

The wheelbarrow holds n 4-lb bricks.



16. **Aviation** A helicopter hovers 40 ft above the ground. Then the helicopter climbs at a rate of 21 ft/s. Write a rule that represents the helicopter's height h above the ground as a function of time t . What is the helicopter's height after 45 s? ← See Problem 2.
17. **Diving** A team of divers assembles at an elevation of -10 ft relative to the surface of the water. Then the team dives at a rate of -50 ft/min. Write a rule that represents the team's depth d as a function of time t . What is the team's depth after 3 min?
18. **Publishing** A new book is being planned. It will have 24 pages of introduction. Then it will have c 12-page chapters and 48 more pages at the end. Write a rule that represents the total number of pages p in the book as a function of the number of chapters. Suppose the book has 25 chapters. How many pages will it have?
19. Write a function rule for the area of a triangle with a base 3 cm greater than 5 times its height. What is the area of the triangle when its height is 6 cm? ← See Problem 3.
20. Write a function rule for the volume of the cylinder shown at the right with a height 3 in. more than 4 times the radius of the cylinder's base. What is the volume of the cylinder when it has a radius of 2 in.?
21. Write a function rule for the area of a rectangle with a length 2 ft less than three times its width. What is the area of the rectangle when its width is 2 ft?



B Apply

22. **Open-Ended** Write a function rule that models a real-world situation. Evaluate your function for an input value and explain what the output represents.