36. **TAKS REASONING** One type of stone formation found in Carlsbad Caverns in New Mexico is called a column. This cylindrical stone formation is connected to the ceiling and the floor of a cave.

a. Rewrite the formula for the circumference of a circle, $C = 2\pi r$, so that you can easily calculate the radius of a column given its circumference.

b. What is the radius, to the nearest tenth of a foot, of a column that has a circumference of 7 feet? 8 feet? 9 feet? (Use 3.14 for π.)

c. *Explain* how you can find the *area* of a cross section of a column if you know its circumference.

← Column

Stalactite

Stalagmite
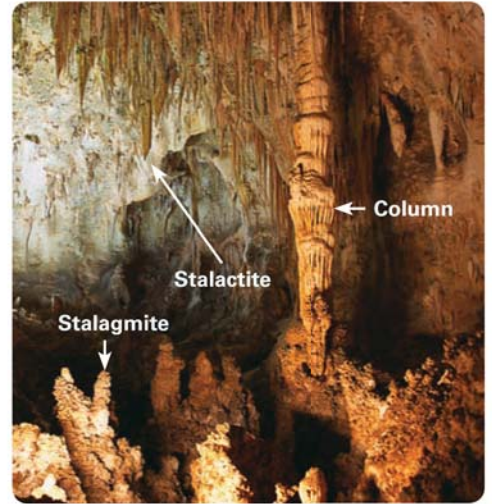
37. **CHALLENGE** The distance d (in miles) traveled by a car is given by $d = 55t$ where t is the time (in hours) the car has traveled. The distance d (in miles) traveled is also given by $d = 20g$ where g is the number of gallons of gasoline used by the car. Write an equation that expresses g as a function of t.

MIXED REVIEW for TAKS

38. **TAKS PRACTICE** Which function includes the points (5, 11) and (9, 13)? *TAKS Obj. 3*

A $f(x) = 5x - 14$ **B** $f(x) = 2x + 1$ **C** $f(x) = 3x - 4$ **D** $f(x) = 0.5(x + 17)$

39. **TAKS PRACTICE** Jed earns $12,500, and he puts $2000 into a savings fund. What percent of his earnings does he put into the fund? *TAKS Obj. 9*

F 16% **G** 18% **H** 22% **J** 25%

QUIZ for Lessons 3.7–3.8

Use the percent equation to answer the question. *(p. 176)*

1. What percent of 150 is 72?
2. What percent of 310 is 93?
3. 31 is 5% of what number?
4. What number is 46% of 55?

Write the equation so that y is a function of x. *(p. 184)*

5. $5x - 3y = 9$
6. $3x + 2y + 5x = 12$
7. $4(2x - y) = 6$

8. **GEOMETRY** The volume V of a cylinder is given by the formula $V = \pi r^2 h$ where r is the radius of the cylinder and h is the height of the cylinder. Solve the formula for h. *(p. 184)*