




1.5 EXERCISES

HOMWORK KEY

-  = **WORKED-OUT SOLUTIONS**
on p. 000 for Exs. 5 and 17
-  = **TAKS PRACTICE AND REASONING**
Exs. 11, 12, 20, 22, 24, and 25
-  = **MULTIPLE REPRESENTATIONS**
Ex. 21

SKILLS AND REASONING

- VOCABULARY** Give an example of a formula.
- WRITING** Describe how you can use a formula to solve the following problem: The inner edges of a cube-shaped pot have a length of 1.5 feet. How much does it cost to fill the planter if soil costs \$4 per cubic foot?

EXAMPLES 1 and 2

on pp. 28–29
for Exs. 3–5

READING AND UNDERSTANDING In Exercises 3–5, identify what you know and what you need to find out. You do *not* need to solve the problem.

- CRAFT SHOW** You make 35 dog collars and anticipate selling all of them at a craft show. You spent \$85 for materials and hope to make a profit of \$90. How much should you charge for each collar?
- DISTANCE RUNNING** A runner ran at a rate of 0.15 mile per minute for 40 minutes. The next day, the runner ran at a rate of 0.16 mile per minute for 50 minutes. How far did the runner run altogether?
- TEMPERATURE** One day, the temperature in Rome, Italy, was 30°C. The temperature in Dallas, Texas, was 83°F. Which temperature was higher?

ERROR ANALYSIS Describe and correct the error(s) in solving the problem.

A town is fencing a rectangular field that is 200 feet long and 150 feet wide. At \$10 per foot, how much will it cost to fence the field?



6.
$$P = 200 + 150 = 350$$
$$\$10(350) = \$3500$$



7.
$$A = (200)(150) = 30,000$$
$$\$10(30,000) = \$300,000$$



CHOOSING A FORMULA In Exercises 8–10, state the formula that is needed to solve the problem. You do *not* need to solve the problem.

- The temperature is 68°F. What is the temperature in degrees Celsius?
- A store buys a baseball cap for \$5 and sells it for \$20. What is the profit?
- Find the area of a triangle with a base of 25 feet and a height of 8 feet.
-  **TAKS REASONING** What is the interest on \$1200 invested for 2 years in an account that earns simple interest at a rate of 5% per year?
(A) \$12 (B) \$60 (C) \$120 (D) \$240
-  **TAKS REASONING** A car travels at an average speed of 55 miles per hour. How many miles does the car travel in 2.5 hours?
(A) 22 miles (B) 57.5 miles (C) 110 miles (D) 137.5 miles
- CHALLENGE** Write a formula for the length l of a rectangle given its perimeter P and its width w . Justify your thinking.

EXAMPLE 3

on p. 30
for Exs. 8–12