

Chapter 3 Review Exercises

Fill in each blank with word that correctly completes the sentence.

1. A literal equation is another name for a(n) _____ . (3.1)
2. When solving an application problem, we write a(n) _____ to define or describe what the variable represents. (3.2)

Section 3.1

Solve the literal equation.

3. $I = Prt$ (Solve for P .)
4. $A = P + Pr$ (Solve for r .)
5. $Z = \frac{x - m}{d}$ (Solve for m .)
6. $ax + by = c$ (Solve for y .)
7. $y = 3x - 8$ (Solve for x .)
8. $y = -\frac{2}{5}x + 6$ (Solve for x .)
9. $4x + 3y = -1$ (Solve for y .)
10. $3x - 2y = 5$ (Solve for y .)

Section 3.2

Solve each application and answer with a complete sentence.

11. Enzo drives 455 miles to visit his girlfriend in college. If he is able to average 65 miles per hour, how long will it take him to get there?
12. After taking his second test, Timon's average score for his first two tests was 85 points. If he scored 91 points on the first test, how many points did Timon score on his second test?
13. In a right triangle, the smallest angle is 19° . What is the measure of the middle angle?
14. The area of Latrice's rectangular painting canvass is 84 square inches. If the width is 18 inches, what is the length of the canvass?
15. Janice is an electrician and charges an initial fee of \$59 for a house call plus \$39 per hour. When she recently visited the Hanson's home for some electrical work, she charged \$124. How long was she working at the Hanson's?

16. Glenn provides a home pick-up shuttle service to the airport. He charges a flat fee of \$20 per pick-up plus \$1.25 per mile. Beverly recently used Glenn's service and was charged \$42.50. How many miles does Beverly live from the airport?

Section 3.3

Solve each application and answer with a complete sentence.

17. To get to her cousin's wedding, Greta drove a total of 1,050 miles. On the first day, she drove 180 miles more than on the second day. How many miles did she drive each day?
18. Luigi's triangular garden has a perimeter of 53 yards. One side is 24 yards. The second side is 7 yards less than twice the third side. What are the lengths of the second and third sides?
19. In a right triangle, the first angle is 12° smaller than twice the measure of the second angle. What are the measures of the first and second angles?
20. The perimeter of a rectangle is 82 inches. The width is 7 inches shorter than the length. What are the length and width of the rectangle?
21. Juana has only two grandchildren, Veronica (the eldest) and Jorge. Her will states that Veronica is to receive \$15,000 more than Jorge receives to help her pay for college. If Juana's will leaves \$103,000 to her two grandchildren, how much will each of them receive?
22. Three sisters, Sally, Mary, and Gretchen, are all in Girl Scouts. During the cookie selling season, they sold a total of 246 boxes of cookies. Mary sold 18 fewer boxes than Sally, and Gretchen sold twice as many boxes as Mary. How many boxes of cookies did each sister sell?