

Answers for Lesson 3-2, pp. 114–115 Exercises

1. The hypotenuse is the longest side.
2. a. 16
b. 144
c. 400
d. 20
3. 17 cm
4. 7.2
5. 7.1 cm
6. 8.1 in.
7. 5
8. 15
9. 25
10. 7.8
11. 17.8
12. 28.4
13. 14.04 ft
14. 24 cm
15. a. 27 in.
b. Answers may vary. Sample: 20 in. by 18 in.
16. 7.1 cm
17. 2.8 cm
18. 14.1 in.
19. 17.0 m
20. 2.3 km
21. Answers may vary. Sample: When you draw a right triangle with hypotenuse \overline{AB} , the lengths of the legs are 100 ft and $200 \text{ ft} - 50 \text{ ft} = 150 \text{ ft}$. Using the Pythagorean Theorem,
$$100^2 + 150^2 = \overline{BA}^2$$
$$10,000 + 22,500 = \overline{BA}^2$$
$$32,500 = \overline{BA}^2$$
$$\sqrt{32,500} = \overline{BA}$$
$$180.3 \approx \overline{BA}$$
The distance across the lake is about 180.3 ft.
22. 6 values
23. yes; $3^2 + (3 + 1)^2 \stackrel{?}{=} (3 + 2)^2$
$$3^2 + 4^2 \stackrel{?}{=} 5^2$$
$$9 + 16 \stackrel{?}{=} 25$$
$$25 = 25$$

Answers for Lesson 3-2, pp. 114–115 Exercises (cont.)

24. 10

25. 50

26. 15

27. 35

28. 2,970

29. 102,000

30. 81,100