

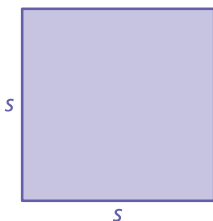
Vocabulary and Concept Check

- VOCABULARY** Is 26 a perfect square? Explain.
- REASONING** Can the square of an integer be a negative number? Explain.
- NUMBER SENSE** Does $\sqrt{256}$ represent the positive square root of 256, the negative square root of 256, or both? Explain.

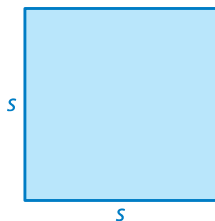
Practice and Problem Solving

Find the side length of the square. Check your answer by multiplying.

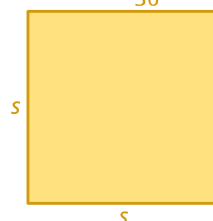
4. Area = 441 cm^2



5. Area = 1.69 km^2



6. Area = $\frac{25}{36} \text{ yd}^2$



Find the two square roots of the number.

1. 9 8. 64 9. 4 10. 144

Find the square root(s).

2. 11. $\sqrt{625}$ 12. $-\sqrt{\frac{9}{100}}$ 13. $\pm\sqrt{\frac{1}{961}}$
 14. $\sqrt{7.29}$ 15. $\pm\sqrt{4.84}$ 16. $-\sqrt{361}$

17. **ERROR ANALYSIS** Describe and correct the error in finding the square roots.

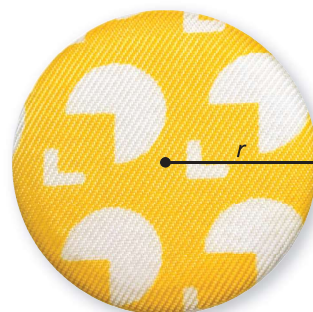
$\pm\sqrt{\frac{1}{4}} = \frac{1}{2}$

Evaluate the expression.

3. 18. $3\sqrt{16} - 5$ 19. $10 - 4\sqrt{\frac{1}{16}}$ 20. $\sqrt{6.76} + 5.4$
 21. $8\sqrt{8.41} + 1.8$ 22. $2\left(\sqrt{\frac{80}{5}} - 5\right)$ 23. $4\left(\sqrt{\frac{147}{3}} + 3\right)$

24. **NOTEPAD** The area of the base of a square notepad is 9 square inches. What is the length of one side of the base of the notepad?

25. **CRITICAL THINKING** There are two square roots of 25. Why is there only one answer for the radius of the button?



$A = 25\pi \text{ mm}^2$

Copy and complete the statement with $<$, $>$, or $=$.

26. $\sqrt{81}$ 8

27. 0.5 $\sqrt{0.25}$

28. $\frac{3}{2}$ $\sqrt{\frac{25}{4}}$

29. **SAILBOAT** The area of a sail is $40\frac{1}{2}$ square feet. The base and the height of the sail are equal. What is the height of the sail (in feet)?

30. **REASONING** Is the product of two perfect squares always a perfect square? Explain your reasoning.

31. **ENERGY** The kinetic energy K (in joules) of a falling apple is represented by $K = \frac{v^2}{2}$, where v is the speed of the apple (in meters per second). How fast is the apple traveling when the kinetic energy is 32 joules?

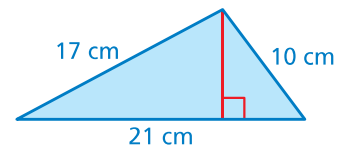


32. **WATCHES** The areas of the two watch faces have a ratio of 16 : 25.

- What is the ratio of the radius of the smaller watch face to the radius of the larger watch face?
- What is the radius of the larger watch face?

33. **WINDOW** The cost C (in dollars) of making a square window with a side length of n inches is represented by $C = \frac{n^2}{5} + 175$. A window costs \$355. What is the length (in feet) of the window?

34. **Geometry** The area of the triangle is represented by the formula $A = \sqrt{s(s - 21)(s - 17)(s - 10)}$, where s is equal to half the perimeter. What is the height of the triangle?



Fair Game Review what you learned in previous grades & lessons

Evaluate the expression. (*Skills Review Handbook*)

35. $3^2 + 4^2$

36. $8^2 + 15^2$

37. $13^2 - 5^2$

38. $25^2 - 24^2$

39. **MULTIPLE CHOICE** Which of the following describes the triangle? (*Section 5.2*)

- | | |
|----------------------------------|---------------------------------------|
| <input type="radio"/> (A) Acute | <input type="radio"/> (B) Right |
| <input type="radio"/> (C) Obtuse | <input type="radio"/> (D) Equiangular |

