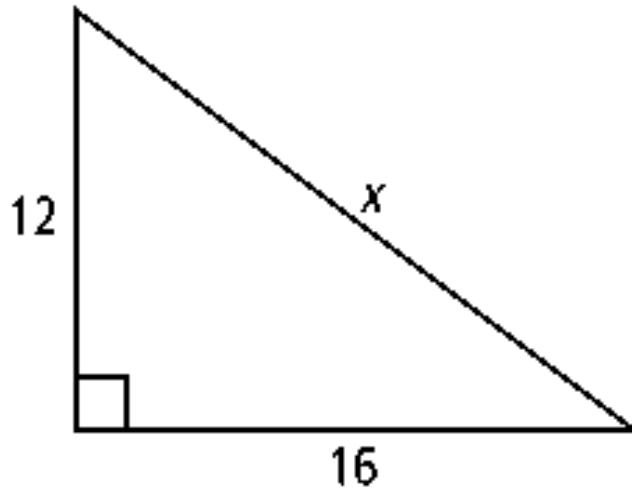


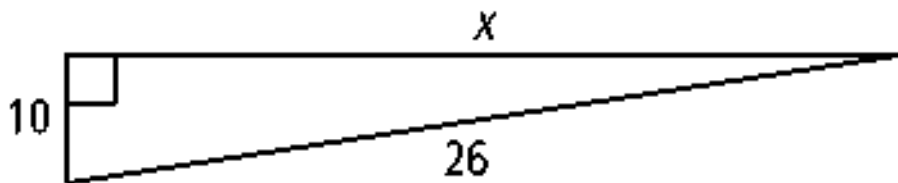
Find the missing length. Show your work!!

1.



Find the missing length. Show your work!!

2.



3. Could the lengths 18 in., 80 in., and 82 in. be the side lengths of a right triangle? Explain.

Simplify the expression. Show your work!!

4. $8\sqrt{6} - 3\sqrt{6}$

Simplify the expression. Show your work!!

5. $\frac{1}{3}\sqrt{7} + \frac{2}{3}\sqrt{7}$

Simplify the expression. Show your work!!

6. $4\sqrt{11} - 7\sqrt{11}$

Simplify the expression. Show your work!!

7. $\sqrt{243}$

Simplify the expression. Show your work!!

8. $\sqrt{25c^2}$

Simplify the expression. Show your work!!

9. $(\sqrt{25})^2$

Simplify the expression. Show your work!!

10. $\sqrt{32}$

Simplify the expression. Show your work!!

11. $\sqrt{128}$

Simplify the expression. Show your work!!

12. $\sqrt{300}$

Simplify the expression. Show your work!!

13. $\sqrt{50} + \sqrt{8}$

Simplify the expression. Show your work!!

14. $4\sqrt{3} + \sqrt{27}$

Simplify the expression. Show your work!!

15. $\sqrt{8} - \sqrt{2}$

Simplify the expression. Show your work!!

16. $\frac{5}{\sqrt{7}}$

Simplify the expression. Show your work!!

17. $\frac{\sqrt{120}}{\sqrt{6}}$

Simplify the expression. Show your work!!

18. $\frac{-5\sqrt{3}}{\sqrt{12}}$

Simplify the expression. Show your work!!

19. $\sqrt{3}(\sqrt{12} + 4)$

Simplify the expression. Show your work!!

20. $\sqrt{8}(\sqrt{3} + 3)$

Simplify the expression. Show your work!!

21. $\sqrt{7}(\sqrt{7} - 2)$

Simplify the expression. Show your work!!

22. $(2\sqrt{3} + \sqrt{5})(6\sqrt{5} - 4\sqrt{3})$

Simplify the expression. Show your work!!

23. $(7 + 3\sqrt{5})(7 - 3\sqrt{5})$

Level 4-Simplify the expression. Show your work!!

24. $\frac{7\sqrt{5}}{3+\sqrt{2}}$

Level 4-Simplify the expression. Show your work

25. $\frac{5}{\sqrt{7}+2}$

Level 4-Simplify the expression. Show your work

26.
$$\frac{1}{\sqrt{7}-\sqrt{3}}$$

Solve the radical equation. Show your work and check your answer!!

27.
$$\sqrt{3x} + 10 = 16$$

Solve the radical equation. Show your work and check your answer!!

28.
$$\sqrt{r+5} = 2\sqrt{r-1}$$

Solve the radical equation. Show your work and check your answer!!

29.
$$\sqrt{2x-1} = x$$

Solve the radical equation. Show your work and check your answer!!

30. $\sqrt{x - 3} = \sqrt{x + 5}$

Solve the radical equation. Show your work and check your answer!!

31. $\sqrt{5n - 4} = 6$

Solve the radical equation. Show your work and check your answer!!

32. $\sqrt{\frac{a}{2} - 3} = -32$

Solve the radical equation. Show your work and check your answer!!

33. $\sqrt{2x^2 + 17} = \sqrt{(x + 3)^2}$

Solve the radical equation. Show your work and check your answer!!

34. $h = \sqrt{-13h - 42}$

35. Two sides of a right triangle are 8 and 12 in.

a. Find the missing side if these are the lengths of the legs.

b. Find the missing side if these are the lengths of a leg and hypotenuse.

36. The foot of a ladder is placed 6 feet from a wall. If the top of the ladder rests 8 feet up on the wall, how long is the ladder?

37. The bottom of a ladder must be placed 3 ft. from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall?

38. John leaves school to go home. He walks 6 blocks North and then 8 blocks west. How far is John from the school?