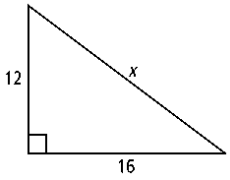
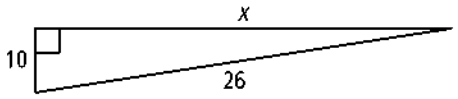
10.1-10.4 Review

Name: _____

Find the missing length. Show your work!!

1. 

2. 

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

Simplify each expression. Show your work!!

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

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

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

7. $\sqrt{243}$

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

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

10. $\sqrt{32}$

11. $\sqrt{128}$

12. $\sqrt{300}$

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

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

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

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

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

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

Simplify each expression. Show your work!!

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

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

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

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

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

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

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

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

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

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

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

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

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

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