Name_____ Date _____

Extra Practice

In Exercises 1–10, solve the equation. Check your solution(s).

1. $\sqrt{1-x} = 7$

2. $\sqrt[3]{5x+1} = -4$

3. $\frac{1}{4}\sqrt[4]{2x} + 6 = 10$

4. $2\sqrt[3]{13x-5} = 10$

5. $x - 7 = \sqrt{x-5}$

6. $\sqrt[3]{486 - 27x^3} = 3x$

7. $4\sqrt{x+1} = x + 1$

8. $\sqrt{2x+2} - 3\sqrt{x+1} = 0$

9. $2 - \sqrt[4]{2x-6} = 14$

10. $\sqrt{x+7} + 2 = \sqrt{3-x}$

5.4 **Notetaking with Vocabulary** (continued)

In Exercises 11 and 12, solve the equation. Check your solution(s).

11. $\frac{1}{2}x^{5/2} = 16$

12. $(6x + 10)^{7/3} + 28 = 156$

In Exercises 13–15, solve the inequality.

13. $-4\sqrt{x - 1} + 3 \geq -1$

14. $\sqrt[3]{\frac{2}{3}x + 1} < 6$

15. $2\sqrt{\frac{3}{4}x} - 39 \leq -25$

16. In basketball, the term "hang time" is the amount of time that a player is suspended in the air when making a basket. To win a slam-dunk contest, players try to maximize their hang time. A player's hang time is given by the equation $t = 0.5\sqrt{h}$, where t is the time (in seconds) and h is the height (in feet) of the jump. The second-place finisher of a slam-dunk contest had a hang time of 1 second, and the winner had a hang time of 1.2 seconds. How many feet higher did the winner jump than the second-place finisher?