

# Algebra II Lesson 5.4

Name \_\_\_\_\_ Period \_\_\_\_\_

## Notes and Assignment

Solve  $2\sqrt[3]{x-3} = 4$

1. Solve  $2\sqrt{x+2} = 8$

Solve  $\sqrt[3]{2x-5} - 2 = 3$

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

Solve  $\sqrt{2x+7} = x-4$

3. Solve  $\sqrt{10x+9} = x+3$

Solve  $(x+12)^{1/2} = x$

4. Solve  $(x+6)^{1/2} = x$

Solve  $(3x)^{3/4} - 2 = 25$

5. Solve  $(x+2)^{3/4} = 8$

To win a basketball 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?