Name_____ Date_____

Unit: 4C

Test Review

1. $\sqrt{x} = \frac{1}{9}$

2. $\sqrt[3]{4x + 11} = 5$

3. $\sqrt{5x + 3} = \sqrt{4x - 0}$

4. $\sqrt{4x + 15} - 3\sqrt{x} = 0$

5. The voltage V required for a circuit is given by $V = \sqrt{PR}$, where P is the power in watts and R is the resistance in ohms. How many more volts are needed to light a 125-watt light bulb than a 75-watt light bulb if the resistance of both is 110 ohms?

6. The time T in seconds that it takes a pendulum to make a complete swing back and forth is given by the formula $T = 2\pi\sqrt{\frac{L}{g}}$, where L is the length of the pendulum in feet and g is the acceleration due to gravity, 32 feet per second squared. A clockmaker wants to build a pendulum that takes 3 seconds to swing back and forth. How long should the pendulum be?

7. Identify the domain, x-intercept, and y-intercept. Round answers to the nearest tenth. Then use the information to graph the function.

   $f(x) = \sqrt{x + 2}$

8. Identify the domain, x-intercept, and y-intercept. Round answers to the nearest tenth. Then use the information to graph the function.

   $f(x) = 2 + \sqrt{x - 1}$

9. Write a radical function that has been shifted 4 units down and 3 units right from the origin.