6-5 Solving Square Root and Other Radical Equations.

Name:

Solve. To start, rewrite the equation to isolate the radical.

1. $\sqrt{x+2}-2=0$ **2.** $\sqrt{2x+3}-7=0$ **3.** $2+\sqrt{3x-2}=6$

Solve.

4. $2(x-2)^{\frac{2}{3}}=50$ **5.** $2(x+3)^{\frac{3}{2}}=54$ **6.** $(6x-5)^{\frac{1}{3}}+3=-2$

7. A The formula $d=2\sqrt{\frac{V}{\pi h}}$ relates the diameter d, in units, of cylinder to its volume V, in cubic units, and its height h, in units. A cylindrical can has a diameter of 3 in. and a height of 4 in. What is the volume of the can to the nearest cubic inch?

Name _____ Class _____ Date _____

6-5 Practice (continued) *Form K*

Solving Square Root and Other Radical Equations

Solve. Check for extraneous solutions. First, isolate the radical, then square each side of the equation.

10. $\sqrt{4x+5} = x+2$

11. $\sqrt{-3x-5} - 3 = x$

12. $\sqrt{x+7} + 5 = x$

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

14. $\sqrt{3x+2} - \sqrt{2x+7} = 0$

15. $\sqrt{2x+4} - 2 = \sqrt{x}$

16. Find the solutions of $\sqrt{x+2} = x$.

a. Are there any extraneous solutions?

b. Reasoning How do you know the answer to part (a)?

17. A floor is made up of hexagon-shaped tiles. Each hexagon tile has an area of 1497 cm^2. What is the length of each side of the hexagon? (*Hint:* Six equilateral triangles make one hexagon.)