9-4 Additional Practice

Solving Quadratic Equations Using Square Roots

Solve each equation by inspection.

1. $x^2 = 64$ **2.** $x^2 = -169$ **3.** $x^2 = 108$ **4.** $x^2 = 200$

Solve each equation.

5. $4x^2 = 81$ **6.** $-3x^2 = -54$ **7.** $-7x^2 = 49$ **8.** $\frac{1}{5}x^2 = 80$

9. $2x^2 - 3 = 11$ **10.** $-3x^2 + 4 = -104$ **11.** $\frac{1}{2}x^2 - 3 = 37$ **12.** $3x^2 + 5 = -145$

13. How can you solve $ax^2 = c$ and $ax^2 + b = c$? Assume $a \neq c$. What is the solution to each equation?

14. The formula for the volume of a cylinder is $V = \pi r^2 h$. What is the radius for a cylinder that has a volume of 160π m^3 and a height of 8 m? Express your answer in simplest radical form and as a decimal rounded to the nearest tenth.