**ERROR ANALYSIS** *Describe* **and correct the error in solving the equation.**

**30.** $2x^2 - 54 = 18$

$2x^2 - 54 = 18$

$2x^2 = 72$

$x^2 = 36$

$x = \sqrt{36}$

$x = 6$

The solution is 6.

**31.** $7d^2 - 6 = -17$

$7d^2 - 6 = -17$

$7d^2 = -11$

$d^2 = -\frac{11}{7}$

$d \approx \pm 1.25$

The solutions are about −1.25 and about 1.25.

**EXAMPLE 4** on p. 654 for Exs. 32–40

**SOLVING EQUATIONS** **Solve the equation. Round the solutions to the nearest hundredth.**

**32.** $(x - 7)^2 = 6$

**33.** $7(x - 3)^2 = 35$

**34.** $6(x + 4)^2 = 18$

**35.** $20 = 2(m + 5)^2$

**36.** $5(a - 2)^2 = 70$

**37.** $21 = 3(z + 14)^2$

**38.** $\frac{1}{2}(c - 8)^2 = 3$

**39.** $\frac{3}{2}(n + 1)^2 = 33$

**40.** $\frac{4}{3}(k - 6)^2 = 20$

**SOLVING EQUATIONS** **Solve the equation. Round the solutions to the nearest hundredth, if necessary.**

**41.** $3x^2 - 35 = 45 - 2x^2$

**42.** $42 = 3(x^2 + 5)$

**43.** $11x^2 + 3 = 5(4x^2 - 3)$

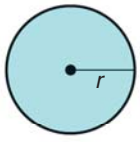
**44.** $\left(\frac{t - 5}{3}\right)^2 = 49$

**45.** $11\left(\frac{w - 7}{2}\right)^2 - 20 = 101$

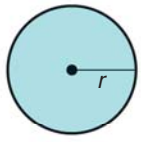
**46.** $(4m^2 - 6)^2 = 81$

**GEOMETRY** **Use the given area $A$ of the circle to find the radius $r$ or the diameter $d$ to the nearest hundredth.**

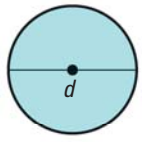
**47.** $A = 144\pi$ in.$^2$



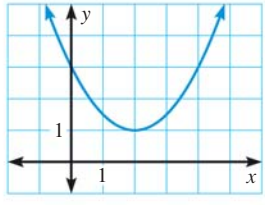

**48.** $A = 21\pi$ m$^2$




**49.** $A = 34\pi$ ft$^2$




**50. REASONING** An equation of the graph shown is $y = \frac{1}{2}(x - 2)^2 + 1$. Two points on the parabola have $y$-coordinates of 9. Find the $x$-coordinates of these points.




**51. TAKS REASONING** Solve $x^2 = 1.44$ without using a calculator. *Explain* your reasoning.

**52. TAKS REASONING** Give values for $a$ and $c$ so that $ax^2 + c = 0$ has (a) two solutions, (b) one solution, and (c) no solution.

**CHALLENGE** **Solve the equation without graphing.**

**53.** $x^2 - 12x + 36 = 64$

**54.** $x^2 + 14x + 49 = 16$

**55.** $x^2 + 18x + 81 = 25$



= WORKED-OUT SOLUTIONS on p. WS1

= TAKS PRACTICE AND REASONING