Solving Quadratic Equations
by Finding Square Roots

1. Solve the equations. Give exact answers using radicals and integers.

  a. $m^2 = 81$ **b.** $m^2 = 91$ **c.** $2x^2 = 50$

  d. $4x^2 = 20$ **e.** $4w^2 + 6 = 14$ **f.** $w^2 - 100 = 3500$

  g. $-7a^2 = 21$ **h.** $\dfrac{3}{4}m^2 = \dfrac{1}{4}$ **i.** $\dfrac{2}{5}m^2 = \dfrac{5}{8}$

2. Find the side of the square to the nearest
   tenth of an inch if its area is 200 sq. ft.

3. For what values of c does the equation $x^2 = c$ have

  a. two solutions   **b.** one solution   **c.** no solutions, within real numbers?

4. Solve the equations. Give exact answers.

  a. $(x + 1)^2 = 81$ **b.** $(x - 5)^2 = 169$ **c.** $(2m - 7)^2 = 400$

  d. $-(7 - 9s)^2 + 225 = 0$ **e.** $\left(6 - \dfrac{x}{3}\right)^2 = 1$ **f.** $\left(10 - \dfrac{3}{4}a\right)^2 = \dfrac{49}{100}$