

- A. Explain the error. Then do the problem correctly.

Solve using the quadratic formula.

$$4n^2 - 81 = 0$$

$$a = 4, b = -81, c = 0$$

$$n = \frac{-(-81) \pm \sqrt{(-81)^2 - 4(4)(0)}}{2(4)}$$

$$n = \frac{81 \pm \sqrt{6561}}{8}$$

$$n = \frac{81 + 81}{8}, n = \frac{81 - 81}{8}$$

$$n = \frac{162}{8}, n = \frac{0}{8}$$

$$n = \frac{81}{4}, n = 0$$

B. Explain the error. Then do the problem correctly.

Solve using the quadratic formula.

$$4x^2 + 33x = 27$$

$$a = 4, b = 33, c = 27$$

$$x = \frac{-(33) \pm \sqrt{(33)^2 - 4(4)(27)}}{2(4)}$$

$$x = \frac{-33 \pm \sqrt{1089 - 432}}{8}$$

$$x = \frac{-33 \pm \sqrt{657}}{8}$$

$$x = \frac{-33 \pm 3\sqrt{73}}{8}$$

- C. Explain the error. Then do the problem correctly.

Solve using the quadratic formula.

$$x^2 + 8x + 5 = 0$$

$$a = 1, b = 8, c = 5$$

$$x = \frac{-(8) \pm \sqrt{(8)^2 - 4(1)(5)}}{2(1)}$$

$$x = \frac{-8 \pm \sqrt{16 - 20}}{2}$$

$$x = \frac{-8 \pm \sqrt{-4}}{2}$$

no real solution; can't have
negative in radical

D. Explain the error. Then do the problem correctly.

Solve using the quadratic formula.

$$3x^2 - 11x + 10 = 0$$

$$a = 3, b = -11, c = 10$$

$$x = \frac{-(-11) \pm \sqrt{(-11)^2 - 4(3)(10)}}{2(3)}$$

$$x = \frac{11 \pm \sqrt{121 - 120}}{5}$$

$$x = \frac{11 \pm \sqrt{1}}{5}$$

$$x = \frac{11+1}{5}, \quad x = \frac{11-1}{5}$$

$$x = \frac{12}{5}, \quad x = \frac{10}{5}$$

$$x = \frac{12}{5}, \quad x = 2$$