Name: _____ Date: _____

BLM 4–6

Section 4.3 Extra Practice

1. What value of k makes each expression a perfect square?

a) $x^2 + 12x + k$

b) $x^2 - 20x + k$

c) $x^2 - 7x + k$

d) $x^2 + \frac{4}{5}x + k$

2. Complete the square to write each quadratic equation in the form $(x + a)^2 = b$.

a) $x^2 + 6x + 4 = 0$

b) $2x^2 - 16x + 10 = 0$

c) $-3x^2 + 15x - 2 = 0$

d) $\frac{1}{2}x^2 + 5x - 4 = 0$

3. Solve each quadratic equation, to the nearest tenth.

a) $(x - 4)^2 = 25$

b) $\left(x + \frac{1}{2}\right)^2 = \frac{1}{4}$

c) $(x - 0.1)^2 = 0.64$

d) $4(x + 7)^2 = 1$

4. Solve each quadratic equation. Express answers as exact roots in simplest form.

a) $x^2 + 2x - 2 = 0$

b) $x^2 - 5x + 3 = 0$

c) $x^2 + 0.6x - 0.16 = 0$

d) $x^2 - \frac{6}{7}x + \frac{9}{49} = 0$

5. Solve each quadratic equation by completing the square. Express answers in simplest radical form.

a) $4x^2 + x - 3 = 0$

b) $-3x^2 - 6x + 1 = 0$

c) $\frac{1}{4}x^2 + x - 5 = 0$

d) $-0.1x^2 + 0.6x - 0.5 = 0$

6. Solve each quadratic equation by completing the square. Express answers to the nearest hundredth.

a) $-2x^2 + 9x + 2 = 0$

b) $3x^2 - 3x - 1 = 0$

c) $\frac{1}{5}x^2 + 2x + 1 = 0$

d) $6x^2 + 3x - 2 = 0$

7. Two numbers have a sum of 22. What are the numbers if their product is 96?