Unit 10.3 Solving for Roots in Quadratic Equations

1. Solve the following equations by factoring

   a. $3x^2 = 6x$

   b. $x^2 - 8x + 16 = 0$

   c. $4x^2 - 4x = 24$

   d. $(x + 5)^2 = 36$

   e. $3x(x - 1) = 2(5 - x)$

   f. $\dfrac{2x^2}{15} - \dfrac{x}{3} = -\dfrac{1}{5}$

   g. $8x^2 + 32 = 32x$

h. $(x + 4)(x - 1) = 6$

i. $x(x+9) = 6(x+3)$

j. $3x(x+3) = 2(2x - 1)$

2. Write a polynomial equation that will fit the given solutions
    a. $x = 2, 3$

    b. $y = -5, -\frac{1}{2}$

    c. $x = -\frac{2}{3}, \frac{1}{6}$

    d. $x = 0, 3, 1$