Section 7.2: Solving Quadratic Equations by Factoring

1. Determine the x-intercepts of each quadratic function by factoring.

a) $x^2 - 12x + 27 = 0$ b) $16x^2 - 32x = 0$

c) $25x^2 = 49$ d) $-3x^2 - 9x + 30 = 0$

e) $4x^2 + 11x + 6 = 0$ f) $x(5x - 9) = 2$

2. Write two different quadratic functions that has roots -2 and 1.4.

3. On a her test, Chloe found the zeros of the quadratic function

$f(x) = 4x^2 + 9x - 9$ to be -3 and $\dfrac{3}{4}$.

Verify whether or not Chloe is correct.

4. The doorway to an art gallery is a parabolic shape, and can be represented by the function $h(w) = -0.5w^2 + 4w$, where h is the height in feet and w is the width in feet. At what two widths does the doorway have a height of 6ft?