In Exercises 1-4 (a) find the standard form of the equation, (b) find the x-intercepts, and (c) use this information to sketch a graph:

1. $f(x) = x^2 - 6x + 8$ 2. $x^2 - 2x - 15$

3. $h(x) = 4x^2 + 32x + 64.$ 4. $m(x) = x^2 - 4x - 16$

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                      Do all work in your notebook

5. For $f(x) = 2x^2$, $g(x) = x + 4$, (a) $f \circ g$, (b) $g \circ f$, and (c) try to find $(f \circ g)(0)$.

For (6) and (7) below, find two functions f and g such that $(f \circ g)(x) = h(x)$. There are many right answers, explain in a complete sentence why yours is correct:

6. $h(x) = \sqrt[3]{x^2 - 4}$ 7. $h(x) = \dfrac{4}{(5x + 3)^2}$

8. The path of a football is given by

$$y = -0.08x^2 + 1.8x + 3$$

Use the *how to solve it* method and figure out how high the football gets. **Hint:** draw a graph!