4. **REINFORCE** How many x-intercepts do the graphs of the following functions have? What are they? Justify your answer by a method other than graphing.

   a. $f(x) = x^3 + x$

   b. $g(x) = (x + 1)(x - 1)^2$

   c. $h(x) = x^3 + 27$

   d. $j(x) = x^3 - 1$

5. **REINFORCE** Construct a 4th-degree polynomial with the following characteristics:

   a. Exactly 4 distinct real zeros

   b. Exactly 3 distinct real zeros

   c. Exactly 2 distinct real zeros

   d. Exactly 1 distinct real zero

   e. No real zeros

6. **REINFORCE** Construct a cubic polynomial with no real zeros.