Example

Consider the polynomial function $f(x) = (x - 1)^3$.

1. Use the Leading Coefficient Test to determine the graph’s end behavior.

   **ANSWER:**
   
   $f(x) = (x - 1)^3 = x^3 - 3x^2 + 3x - 1$. The degree is 3, which is an odd number, and the leading coefficient is 1, which is positive. Then the graph falls left and rises right.

2. Find the intercepts of the graph of $f$.

   **ANSWER:**
   
   Since $f(x) = (x - 1)^3$, the only $x$-intercept is $x = 1$. The $y$-intercept is $f(0) = (0 - 1)^3 = -1$. 