Example

For each function, give the degree if it is a polynomial.

1. \( f(x) = 2x^2 - \frac{5}{2}x \)

   **ANSWER:** \( 2 \)
   
   This function is a polynomial since all the powers of \( x \) are nonnegative integers, and no positive powers of \( x \) appear in any denominators. The highest power of \( x \) is 2, so the degree is 2.

2. \( g(x) = x^2 - 2\sqrt{x} \)

   **ANSWER:** \( \text{none} \)
   
   \( \sqrt{x} = x^{1/2} \), so \( g(x) \) has a power of \( x \) which is not an integer, which means \( g(x) \) is not a polynomial.