

Determine the degree, leading term, constant coefficient, and end behavior of the following polynomials.

1.  $p(x) = 5x^5 + 3x^3 - 22x^2 + 5$

2.  $f(x) = 4x^2 + 14x^3 - 6x^6 - 4x - 1$

3.  $q(x) = (x - 5)(x^2 + 2)$

4.  $g(x) = (x - 1)^3(x + 2)^2(x + 1)(x - 3)$

5.  $P(x) = -2(x - 3)(x - 1)^2(x^2 + 2)$

6.  $p(x) = (-2x + 3)^2(3x - 1) + 1$

7.  $Q(x) = x(x - 5)^5(x - 7)^3(x + 10)(x + 6)^2$

8.  $f(x) = (x + 5)^2(2x - 5)(x^2 + 5x + 6)(3 - x)$