

SM3-A HW #3-2 (Quad. Form & Graphs of Polynomials)

- a) Find the zeroes
b) Determine the end-behavior,
c) Draw the general shape of the graph.

1) $x(5x + 3)(x - 3) = 0$

2) $x(3x + 4)(x + 2) = 0$

3) $x(5x - 2)(x + 4) = 0$

4) $x(5x + 1)(x + 1) = 0$

Find all zeros.

5) $f(x) = 2x^4 + 7x^2 + 6$

6) $f(x) = 5x^4 - 41x^2 - 36$

7) $f(x) = 2x^5 + 9x^3 - 18x$

8) $f(x) = 5x^4 + 6x^2 - 27$

Find each product.

9) $(6x^2 - 7x - 4)(7x^2 - 6x - 3)$

10) $(7x^2 + 8x - 3)(2x^2 - 7x + 1)$

11) $(5k^2 + 6k - 2)(6k^2 - 3k + 4)$

12) $(8x^2 - 7x - 6)(3x^2 - 7x + 3)$