

Advanced Algebra

Polynomial Functions: Finding the Roots of Polynomials – HW #2

For the polynomial functions listed below:

- a. list the number of *possible* positive real roots negative real roots and imaginary roots
- b. list all the *possible* rational roots
- c. find all the roots of the polynomial

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

2) $f(x) = x^4 - 5x^3 + 9x^2 - 7x + 2$

3) $f(x) = 2x^3 + x^2 - 20x - 3$

4) $f(x) = 8x^3 - 6x^2 - 23x + 6$

5) $f(x) = x^4 - x^3 - 10x^2 - 8x$