

6.3 Solving Polynomial Equations

Find all roots using your calculator and classify them as rational, irrational or imaginary.

1) $x^4 + 2x^3 - 3x^2 = 0$

2) $x^3 - 3x + 2 = 0$

3) $x^5 + 3x^4 + 3x^3 + 9x^2 - 54x - 162 = 0$

4) $x^4 + 12x^2 + 27 = 0$

5) $x^3 - 8 = 0$

6) $x^5 + 3x^4 + 13x^3 + 39x^2 + 42x + 126 = 0$

7) $x^5 - 3x^3 - 2x^2 = 0$

8) $x^3 + 125 = 0$

9) $x^4 + 4x^2 - 5 = 0$

10) $x^4 - 13x^3 + 23x^2 + 85x = 0$