

Solving Polynomial Equations

Block: _____ Mark Out Of 24 _____

State the possible rational roots for each equation. Then factor each and find all roots.

1) $x^3 - 5x^2 - x + 5 = 0$

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

3) $x^3 + 4x^2 - 4x - 16 = 0$

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

State the possible rational zeros for each function. Then factor each and find all zeros.

5) $y = 5x^3 + 2x^2 - 20x - 8$

6) $y = 3x^3 - 4x^2 - 3x + 4$

7) $y = -6x^3 + 11x^2 + 13x + 2$

8) $y = 7x^3 + 83x^2 + 65x - 11$