0.2 Review of Pre-Calculus (part 2)

Remainder Theorem

What is the remainder when $P(x) = x^4 - 2x^3 + 5x^2 - 4$ is divided by $x - 2$?

Factor Theorem

Is $(x+1)$ a factor of $P(x) = 5x^4 - 3x^2 + 6x + 4$?   Is $(x-1)$?

Rational Root Theorem

Factor completely $4x^3 + 12x^2 + 5x - 6$

Synthetic Division
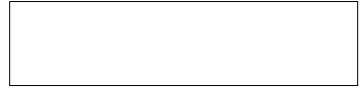
Divide $5x^3 - 13x^2 + 10x - 9$ by $x - 2$ Divide $2y^4 - y^5 - y^3 + 4y$ by $y - 3$

Factor completely

$x^3 - 1$ $x^3 + 27$

Difference of Cubes   **Sum of Cubes**

    $x^3 y^6 - 64$ $27x^3 + 1$