LONG Division of Polynomials

Procedure:
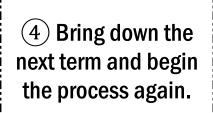
① Divide the 1st terms. (What do you multiply the divisor by to get the first term in the dividend?)

② Multiply times the divisor.

③ Subtract by changing the sings and combining like terms.

④ Bring down the next term and begin the process again.

Examples

$$\frac{2x^3 - 3x^2 - 10x + 7}{x - 3}$$

$$(6x^3 + x^2 + 4x - 5) \div (x + 2)$$

SYNTHETIC Division of Polynomials

Procedure:

$(2x^3 - 3x^2 - 10x + 7) \div (x - 3)$

① Solve your divisor for x.

② Set up the chart with the solved for x & coefficients/constants.

Examples

$(6x^3 + x^2 + 4x - 5) \div (x + 2)$

③ Multiply and add.

④ Write your answer with the appropriate variables & remainder if there is one.