

5a)

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

$$-(x^5 + 9x^4 + 31x^3 + 53x^2 + 48x + 18) : (x^2 + 4x + 3) = x^3 + 5x^2 + 8x + 6$$

$$\frac{-(x^5 + 4x^4 + 3x^3)}{5x^4 + 28x^3 + 53x^2 + 48x + 18}$$

$$\frac{-(5x^4 + 20x^3 + 15x^2)}{8x^3 + 38x^2 + 48x + 18}$$

$$\frac{-(8x^3 + 32x^2 + 24x)}{6x^2 + 24x + 18}$$

$$\frac{-(6x^2 + 24x + 18)}{0}$$