

$$p = 4x^4 + 3x^3 + 2x^2 + x \quad q = 7x^2 + 6x + 5$$

$$p + q = 4x^4 + 3x^3 + 9x^2 + 7x + 5$$

$$p - q = 4x^4 + 3x^3 - 5x^2 - 5x - 5$$

$$P = x^4 + x^3 - 3x^2 - 3x + 7 \quad Q = x^2 + x - 2$$

$$\frac{P}{Q} = \frac{x^4 + x^3 - 3x^2 - 3x + 7}{x^2 + x - 2}$$

dividend: $x^4 + x^3 - 3x^2 - 3x + 7$	$x^4$	$+x^3$	$-3x^2$	$-3x$	$+7$	$x^2 + x - 2$
divisor: $x^2 + x - 2$	$-x^4$	$-x^3$	$+2x^2$			$x^2 - 1$
quotient: $x^2 - 1$			$-x^2$	$-3x$	$+7$	
rest: $-2x + 5$			$x^2$	$+x$	$-2$	
				$-2x$	$+5$	

$$r = -\lambda^3 + 6\lambda^2 - 11\lambda + 6 = (\lambda - 2)(-\lambda^2 + 4\lambda - 3)$$

	$-1$	$6$	$-11$	$6$
	$\downarrow$	$-2$	$8$	$-6$
$2$	$-1$	$4$	$-3$	$0$

$$-\lambda^3 + 6\lambda^2 - 11\lambda + 6$$