

$$f(x) = 4x^3 + (7x-3)(x^2+1) - 7x + 5$$

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

$$f(x) = 4x^3 + (2x^3 - 3x^2 + 2x - 3) - 7x + 5$$

$$f(x) = 4x^3 + 2x^3 - 3x^2 + 2x - 7x - 3 + 5$$

$$f(x) = 6x^3 - 3x^2 - 5x + 2$$

$$g(x) = 5x^4 - 3x \cdot (x-2) + (4x+1)(x^2-1) \cdot 8$$

$$g(x) = \frac{d}{dx} (5x^4 - 3x \cdot (x-2) + (4x+1)(x^2-1) \cdot 8)$$

$$g(x) = \frac{d}{dx} (5x^4 - 3x^2 + 6x + (4x+1)(x^2-1) \cdot 8) = \frac{d}{dx} (5x^4 - 3x^2 + 6x + (32x+8)(x^2-1))$$

$$g(x) = \frac{d}{dx} (5x^4 - 3x^2 + 6x + 32x^3 - 32x + 8x^2 - 8)$$

$$g(x) = \frac{d}{dx} (5x^4 + 5x^2 + 6x + 32x^3 - 32x - 8) = \frac{d}{dx} (5x^4 + 5x^2 - 26x + 32x^3 - 8)$$

$$g(x) = 5 \cdot 4x^3 + \frac{d}{dx} (5x^2) + \frac{d}{dx} (-26x) + \frac{d}{dx} (32x^3) - \frac{d}{dx} (8)$$

$$g(x) = 20x^3 + 10x + 96x^2 - 26$$

$$h(x) = 6x^5 + (x-1)(3x^3+2) - 4x^2 + 9$$

$$h(x) = \frac{d}{dx} (6x^5 + (x-1)(3x^3+2) - 4x^2 + 9)$$

$$h(x) = \frac{d}{dx} (6x^5 + 3x^4 + 2x - 3x^3 - 2 - 4x^2 + 9)$$

$$h(x) = \frac{d}{dx} (6x^5 + 3x^4 + 2x - 3x^3 + 7 - 4x^2)$$

$$h(x) = \frac{d}{dx} (6x^5) + \frac{d}{dx} (3x^4) + \frac{d}{dx} (2x) + \frac{d}{dx} (-3x^3) + \frac{d}{dx} (7) + \frac{d}{dx} (-4x^2)$$

$$h(x) = 6 \times 5x^4 + 3 \times 4x^3 + 2 - 3 \times 3x^2 + 0 - 4 \times 2x$$

$$h(x) = 30x^4 + 12x^3 - 9x^2 - 8x + 2$$

$$p(x) = x^6 - 2x \cdot (x^3+1) + (x+2)(x^2-x) + 10$$

$$p(x) = \frac{d}{dx} (x^6 - 2x(x^3+1) + (x+2)(x^2-x) + 10)$$

$$p(x) = \frac{d}{dx} (x^6 - 2x^4 - 2x + (x+2)(x^2-x) + 10) = \frac{d}{dx} (x^6 - 2x^4 - 2x + x^2 - x^2 + 2x^2 - 2x + 10)$$

$$p(x) = \frac{d}{dx} (x^6 - 2x^4 - 4x + x^3 + x^2 + 10) = \frac{d}{dx} (x^6 - 2x^4 - 4x + x^3 + x^2 + 10)$$

$$p(x) = \frac{d}{dx} (x^6) + \frac{d}{dx} (-2x^4) + \frac{d}{dx} (-4x) + \frac{d}{dx} (x^3) + \frac{d}{dx} (x^2) + \frac{d}{dx} (10)$$

$$p(x) = 6x^5 - 2 \times 4x^3 - 4 + 3x^2 + 2x + 0$$

$$p(x) = 6x^5 - 8x^3 + 3x^2 + 2x - 4$$

$$Q(x) = 3x^4 + (2x+3)(x-1) - 5x + 12$$

$$Q(x) = \frac{d}{dx} (3x^4 + (2x+3)(x-1) - 5x + 12)$$

$$Q(x) = \frac{d}{dx} (3x^4 + 2x^2 - 2x + 3x - 3 - 5x + 12)$$

$$Q(x) = \frac{d}{dx} (3x^4 + 2x^2 - 4x - 3 + 12) = \frac{d}{dx} (3x^4 + 2x^2 - 4x + 9)$$

$$Q(x) = \frac{d}{dx} (3x^4) + \frac{d}{dx} (2x^2) + \frac{d}{dx} (-4x) + \frac{d}{dx} (9)$$

$$Q(x) = 3 \times 4x^3 + 2 \times 2x - 4 + 0$$

$$Q(x) = 12x^3 + 4x - 4$$

$$r(x) = 7x^5 + (4x-2)(x^2+3x) - 3x + 15$$

$$r(x) = \frac{d}{dx} (7x^5 + (4x-2)(x^2+3x) - 3x + 15)$$

$$r(x) = \frac{d}{dx} (7x^5 + 4x^3 + 12x^2 - 2x^2 - 6x - 3x + 15)$$

$$r(x) = \frac{d}{dx} (7x^5 + 3x^3 + 10x^2 - 6x + 15) = \frac{d}{dx} (7x^5 + 3x^3 + 10x^2 - 6x + 15)$$

$$r(x) = \frac{d}{dx} (7x^5) + \frac{d}{dx} (3x^3) + \frac{d}{dx} (10x^2) + \frac{d}{dx} (-6x) + \frac{d}{dx} (15)$$

$$r(x) = 7 \times 5x^4 + 3 \times 3x^2 + 10 \times 2x - 6 + 0$$

$$r(x) = 35x^4 + 9x^2 + 20x - 6$$

$$S(x) = x^4 - 5x \cdot (x^3 + 2) + (2x - 1)(x^2 + x) + 6$$

$$S(x) = \frac{d}{dx} (x^4 - 5x \cdot (x^3 + 2) + (2x - 1)(x^2 + x) + 6)$$

$$S(x) = \frac{d}{dx} (x^4 - 5x^4 - 10x + (2x - 1)(x^2 + x) + 6) = \frac{d}{dx} (x^4 - 5x^4 - 10x + 2x^3 + 2x^2 - x^2 - x + 6)$$

$$S(x) = \frac{d}{dx} (-4x^4 - 15x + 2x^3 + x^2 + 6)$$

$$S(x) = \frac{d}{dx} (-4x^4) + \frac{d}{dx} (-15x) + \frac{d}{dx} (2x^3) + \frac{d}{dx} (x^2) + \frac{d}{dx} (6)$$

$$S(x) = -4 \cdot 4x^3 - 15 + 2 \cdot 3x^2 + 2x + 0$$

$$S(x) = -16x^3 + 6x^2 + 2x - 15$$

$$f(x) = 3x^2 + (x+4)(x^3 - x^2) - 9x + 11$$

$$f(x) = \frac{d}{dx} (3x^2 + (x+4)(x^3 - x^2) - 9x + 11)$$

$$f(x) = \frac{d}{dx} (3x^2 + x^4 - 3x + 4x^3 - 4x^2 - 9x + 11)$$

$$f(x) = \frac{d}{dx} (-x^2 + x^4 - x^3 + 4x^3 - 9x + 11) = \frac{d}{dx} (-x^2 + x^4 - 3x^3 - 9x + 11)$$

$$f(x) = \frac{d}{dx} (x^2) + \frac{d}{dx} (x^4) + \frac{d}{dx} (-3x^3) + \frac{d}{dx} (-9x) + \frac{d}{dx} (11)$$

$$f(x) = -2x + 4x^3 + 3 \cdot (-3x^2) - 9 + 0$$

$$f(x) = 4x^3 + 9x^2 - 2x - 9$$

$$u(x) = 6x^3 - (3x+5)(x^2-2) + 9x + 8$$

$$u(x) = \frac{d}{dx} (6x^3 - (3x+5)(x^2-2) + 9x + 8)$$

$$u(x) = \frac{d}{dx} (6x^3 - (3x^2 - 3x + 5x^2 - 5) + 9x + 8)$$

$$u(x) = \frac{d}{dx} (6x^3 - 3x^2 + 3x - 5x^2 + 5 + 9x + 8)$$

$$u(x) = \frac{d}{dx} (3x^3 + 7x - 5x^2 + 13)$$

$$u(x) = \frac{d}{dx} (3x^3) + \frac{d}{dx} (7x) + \frac{d}{dx} (-5x^2) + \frac{d}{dx} (13)$$

$$u(x) = 3 \times 3x^2 + 7 - 5 \times 2x + 0$$

$$u(x) = 9x^2 - 10x + 7$$

$$v(x) = 2x^5 + (x-3)(2x^4 + x^2) - 7x + 13$$

$$v(x) = \frac{d}{dx} (2x^5 + (x-3)(2x^4 + x^2) - 7x + 13)$$

$$v(x) = \frac{d}{dx} (2x^5 + 2x^5 + x^3 - 6x^4 - 3x^2 - 7x + 13)$$

$$v(x) = \frac{d}{dx} (4x^5 + x^3 - 6x^4 - 3x^2 - 7x + 13)$$

$$v(x) = \frac{d}{dx} (4x^5) + \frac{d}{dx} (x^3) + \frac{d}{dx} (-6x^4) + \frac{d}{dx} (-3x^2) + \frac{d}{dx} (-7x) + \frac{d}{dx} (13)$$

$$v(x) = 4 \times 5x^4 + 3x^2 - 6 \times 4x^3 - 3 \times 2x - 7 + 0$$

$$v(x) = 20x^4 - 24x^3 + 3x^2 - 6x - 7$$