Trabajo ¿GUPA1?

1)

$$3+2x^2+4x^3-8x$$
$$-3+2x^2-4x^3+8x$$

0

2)

$$2.5(x) = -4+2x^2-2x^3+2x$$
$$-4P(x) = -20-16x^2+20x^3-16x$$
$$= -24-14x^2+18x^3-14x$$

3) $3 \cdot Q(x) + 2 \cdot 5(x)$

$3 \cdot Q(x) = 9 - 6x^2 + 12x^3 - 24x$

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

$5 - 4x^2 + 10x^3 - 22x$

4) $5 \cdot 5(x) - 2Q(x)$

$5 \cdot 5(x) = -10 + 5x^2 - 5x^3 + 5x$

$-2Q(x) = -6 + 4x^2 - 8x^3 + 16x$

$= -16 + 9x^2 - 13x^3 + 21x$

5) $[P(x) + S(x)] - R(x)$

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

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

$-R(x) = 8x - 4x^3 + 2x^2 - 3$

$= 13x - 10x^3 + 7x^2$

6) $[Q(x) - S(x)] - S(x)$

$Q(x) - S(x) - Sx$

$Q(x) - 2S(x)$

$Q(x) = 3 - 2x^2 + 4x^3 - 8x$

$-2S(x) = 4 - 2x^2 + 2x^3 - 2x$

$= 7 - 4x^2 + 6x^3 - 10x$

7. $[S(x) + R(x)] - P(x)$

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

$R(x) = 3 - 2x^2 + 4x^3 - 8x$

$-P = -5 - 4x^2 + 5x^3 - 4x$

$= -4 - 5x^2 + 8x^3 - 11x$

8. $S(x) + [P(x) - R(x)]$

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

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

$-R(x) = -3 + 2x^2 - 4x^3 + 8x$

$= 7x^2 - 10x^3 + 13x$

9)

$$Q(x) = 3 - 2x^2 + 4x^3 - 8x$$
$$-P(x) = -5 - 4x^2 + 5x^3 - 4x$$
$$-R(x) = -3 + 2x^2 - 4x^3 + 8x$$

$$-5 - 4x^2 + 5x^3 - 4x$$

10)

$$R(x) = -2x^2 + 3 - 8x + 4x^3$$
$$-S(x) = -x^2 + 2 - x + x^3$$
$$-Q(x) = +2x^2 - 3 + 8x - 4x^3$$

$$= -x^2 + 2 - x + x^3$$

11)

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

$-R(x) = 8x - 4x^3 + 2x^2 - 3$

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

$= 13x - 10x^3 + 7x^2$

II

1

$12x^3y^2 + 15x^3y^5$

2

$8x^8y^5 - 20x^6x^7$

3

$$3x^5 - 6x^4 + 9x^3 - 24x^2$$

4

$$16x^3 + 8x^{20}$$

5

$$-6x^6y^3 - 9y^9 + 6x^7y^6$$

6

$$15b^2c^5 + 10bc$$

7 $16x^{4n+3}y^{4n+2} - 24x^{5n+1}y^{n+6} + 8x^{5n+1}y^{4}$

8 $x^2 - 2x + 8x + 16 - x^2 + 6x - 16$

9 $-12x^2 + 15x + 8x - 10 = -12x^2 + 23x - 1$

10 $12x^2 + 20y - 9y^2 - 15 = 3x^2 + 20x - 15$

11.

$20x^2 + 15xy + 8xy + 6y^2 = x^2 + 23xy + 6y^2$

12

$24x^2 - 32x + 6x - 8 = 24x^2 - 26x - 8$

13

$28x^2 + 21xy - 8xy - 6y^2 = 28x^2 + 13xy -$

y^2

14

$$x^{2n+1} + x^{2n} + x^{n+1} + x^{n-1} + 1$$

15

$$8a^3 + 6a^2 - 4a + 20a^2 + 15a - 10 = 8a^3 + 26a^2 + 11a - 10$$

16

$$x^3 - x^2y + x^2y - xy^2 + y^3 = x^3 + x^3$$

17

$$2x^4 - 3x^3 + 5x^2 - 2x - 2x^3 + 3x^2 - 5x + 2$$

18 $(x+2)(x+3)(x+5)$

$(x^2+3x+2x+6)(x+5)$

$(x^2+5x+6)(x+5)$

$x^3+5x^2+6x+5x^2+25x+30$

$x^3+10x^2+31x+30$

19 $(x^2+x-1)(x^2-x+1$

$x^4 - x^3 + x^2$

$+x^3 - x^2 + x$

$-x^2 + x - 1$

$x^4 - x^2 + 2x - 1$

20

$(x^2+2x-3x-6)(x-4$

$(x^2 - x - 6)(x-4)$

$x^3 - x^2 - 6x - 4x^2 + 4x + 24$

$x^3 - 5x^2 - 2x + 24$

III

1

$$\frac{8x^3}{4x} + \frac{12x^2}{4x} = 2x^2 + 3x$$

2

$$\frac{25x^4y^6}{25x^2y^3} - \frac{125x^7y^4}{25x^2y^3} = x^2y^3 - 5x^5y$$

3

$$\frac{8x^{8}y^{5}}{4x^{2}y} - \frac{12x^{4}y^{8}}{4x^{2}y} + \frac{16x^{5}y^{6}}{4x^{2}y} = 2x^{6}x^{4} - 3x^{}$$

$4x^{3}y^{5}$

4

$$\frac{32x^{8}y^{9}}{8y^{3}} - \frac{48x^{9}y^{10}}{8y^{3}} - \frac{24y^{2}}{8y^{3}} = 4x^{8}y^{6} - 6x$$

$3y^{-1}$

5

$$\frac{21x^8y^5}{5x^3y^3} - \frac{15x^6y^4}{5x^3y^3} + \frac{35x^7y^9}{5x^3y^3} = \frac{21}{5}x^5y^2 - 3x$$

$7x^4y^6$

6

$$\frac{28x^8y^4z^5}{7x^3y^4} - \frac{35x^6y^5z^{12}}{7x^3y^4} + \frac{7x^7y^5z^9}{7x^3y^4} = 4x^5z^5 - 5x$$

$yz^{12} + x^4yz^9$

7

$$\frac{75x^{2n+3}}{5x^{2n-2}} + \frac{15x^{2n-4}}{5x^{2n-2}} + \frac{40x^{2n+6}}{5x^{2n-2}} = 15x^5 + 3x^{-2} + 8x^8$$

8

$$\frac{28x^{n+4}}{7x^{n-2}} - \frac{63x^{n-3}}{7x^{n-2}} - \frac{77x^{n-8}}{7x^{n-2}} =$$

$$4x^6 - 9x^{-1} - 11x^8$$

9.

$$\frac{x^{n+3}y^{n+4}}{x^{n-1}y^{n+2}} - \frac{x^{n+4}y^{n+7}}{x^{n-1}y^{n+2}} + \frac{x^{n+5}x^{n+8}}{x^{n-1}y^{n+2}} =$$

$$x^4y^2 - x^5y^5 + x^6y^6$$

10

$$\frac{8x^{n+2}y^{n-3}}{4x^{n-4}y^{n+1}} + \frac{20x^{n+8}y^{n-5}}{4x^{n-4}y^{n+1}} = 2x^6y^{-4} + 5x^{12}y^{-6}$$

IV

1

$3x^3 + 2x^2 - 5x - 4$ | $x + 1$

$-3x^3 - 3x^2$ | $3x^2 - 1x - 4$

$-1x^2 - 5x$

$+1x^2 + 1x$

$-4x - 4$

$4x - 4$

0 ← Residuo

↑ cociente

2

$$4x^3 - 6x^2 + 3x - 14$$
$$-4x^3 + 8x^2$$
$$+2x^2 + 3x$$
$$-2x^2 + 4x$$
$$+7x - 14$$
$$-7x + 14$$
$$0$$

Cociente: $Q(x) = 4x^2 + 2x + 7$

Residuo: $R(x) = 0$

3.

$6x^4 - 8x^3 - 0x^2 - 10x - 12 \quad | \; 2x - 4$