



Mi Universidad

Probleuario

Nombre del Alumno: Alma Camila Hernández Méndez

Nombre del tema: Operaciones fundamentales

Parcial: 3

Nombre de la Materia: Álgebra

Nombre del profesor: Juan José Ojeda Trujillo

Bachillerato recursos humanos

Cuatrimestre: I

Plataforma

$$1. (3A^3 + 5A^2 - 4) \div (3A)$$

$$\frac{3A^3}{3A} + \frac{5A^2}{3A} - \frac{4}{3A} = \frac{3}{3}A^2 + \frac{5}{3}A - \frac{4}{3A}$$

$$2. (2/3 A^2 B^2 - 1/4 A^2 B^4 + 5/6 AB^4 - 2/5 B^5) \div (-1/2 AB^2)$$

$$\frac{2}{3} a^2 b^2 \quad \frac{1}{4} a^2 b^4 \quad \frac{5}{6} a b^4 \quad \frac{2}{5} b^5$$

$$\frac{1}{2} a b^2 \quad \frac{1}{2} a b^2 \quad \frac{1}{2} a b^2 \quad \frac{1}{2} a b^2$$

$$\frac{4}{3} a b^0 - \frac{2}{4} a b^2 + \frac{10}{6} a b^2 - \frac{4}{5} a b^0$$

$$\frac{4a}{3} - \frac{1ab^2}{2} + \frac{5b^2}{3} - \frac{4ab^0}{5}$$

$$3. (x^4 - 2x^3 - 11x^2 + 30x - 20) \div (x^2 + 3x - 2)$$

$$\begin{array}{r} x^2 - 5x + 6 \\ x^2 + 3x - 2 \overline{) x^4 - 2x^3 - 11x^2 + 30x - 20} \\ \underline{-x^4 - 3x^3 + 2x^2} \\ -5x^3 - 9x^2 + 30x \\ \underline{5x^3 + 15x^2 - 10x} \\ 6x^2 + 20x - 20 \\ \underline{-6x^2 - 18x + 12} \\ 2x - 8 \end{array}$$

$$R = x^2 - 5x + 6 \left(\frac{2x - 8}{x^2 + 3x - 2} \right)$$

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

$$\begin{array}{r}
 x^4 + x^3 + 3x^2 + 6 \\
 x^2 - x + 3 \overline{) x^6 + 0x^5 + 5x^4 + 0x^3 + 3x^2 - 2x + 0} \\
 \underline{-x^6 + x^5 - 3x^4} \\
 x^5 + 2x^4 + 0x^3 \\
 \underline{-x^5 + x^4 - 3x^3} \\
 3x^4 - 3x^3 + 3x^2 \\
 \underline{-3x^4 + 3x^3 - 9x^2} \\
 -6x^2 - 2x + 0 \\
 \underline{+ 6x^2 - 6x + 18} \\
 -8x + 18
 \end{array}$$

$$R = x^4 + x^3 + 3x^2 - 6 \left(\frac{-8x + 18}{x^2 - x + 3} \right)$$

$$5. (x^4 - 2x^3 - 11x^2 + 30x - 20) \div (x^2 + 3x - 2)$$

$$\begin{array}{r}
 x^2 - 5x + 6 \\
 x^2 + 3x - 2 \overline{) x^4 - 2x^3 - 11x^2 + 30x - 20} \\
 \underline{-x^4 - 3x^3 + 2x^2} \\
 -5x^3 - 9x^2 + 30x \\
 \underline{5x^3 + 15x^2 - 10x} \\
 6x^2 + 10x - 20 \\
 \underline{-6x^2 - 18x + 12} \\
 2x - 8
 \end{array}$$

$$R = x^2 - 5x + 6 \left(\frac{2x - 8}{x^2 + 3x - 2} \right)$$

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

$$\begin{array}{r}
 x^4 + x^3 + 3x^2 + 6 \\
 x^2 - x + 3 \overline{) x^6 + 0x^5 + 5x^4 + 0x^3 + 3x^2 - 2x + 0} \\
 \underline{-x^6 + x^5 - 3x^4} \\
 x^5 + 2x^4 + 0x^3 \\
 \underline{-x^5 + x^4 - 3x^3} \\
 3x^4 - 3x^3 + 3x^2 \\
 \underline{-3x^4 + 3x^3 - 9x^2} \\
 -6x^2 - 2x + 0 \\
 \underline{+ 6x^2 - 6x + 18} \\
 -8x + 18
 \end{array}$$

$$R = x^4 + x^3 + 3x^2 - 6 \left(\frac{-8x + 18}{x^2 - x + 3} \right)$$

Rayter

$$70 - (2x^4 - 2x^3 + 3x^2 + 5x + 10) \div (x+2)$$

$$\begin{array}{r}
 2x^3 - 6x^2 + 15x - 25 \\
 x+2 \overline{) 2x^4 - 2x^3 + 3x^2 + 5x + 10} \\
 \underline{-2x^4 - 4x^3} \\
 -6x^3 + 3x^2 \\
 \underline{6x^3 + 12x^2} \\
 15x^2 + 5x \\
 \underline{-15x^2 - 30x} \\
 -25x + 100 \\
 \underline{25x + 50} \\
 60
 \end{array}$$

$$R = 2x^3 - 6x^2 + 15x - 25 \left(\frac{60}{x+2} \right)$$

$$80 - (x^{10} - 1024) \div (x+2)$$

$$\begin{array}{r}
 x^9 - 2x^8 + 4x^7 - 8x^6 + 16x^5 - 32x^4 + 64x^3 - 128x^2 + 256x - 512 \\
 x+2 \overline{) x^{10} + 0x^9 + 0x^8 + 0x^7 + 0x^6 + 0x^5 + 0x^4 + 0x^3 + 0x^2 + 0x - 1024} \\
 \underline{-x^{10} - 2x^9} \\
 -2x^9 + 0x^8 \\
 \underline{+ 2x^9 + 4x^8} \\
 4x^8 + 0x^7 \\
 \underline{-4x^8 - 8x^7} \\
 -8x^7 + 0x^6 \\
 \underline{8x^7 + 16x^6} \\
 16x^6 + 0x^5 \\
 \underline{-16x^6 - 32x^5} \\
 -32x^5 + 0x^4 \\
 \underline{32x^5 + 64x^4} \\
 64x^4 + 0x^3 \\
 \underline{-64x^4 - 128x^3} \\
 -128x^3 + 0x^2 \\
 \underline{128x^3 + 256x^2} \\
 256x^2 + 0x \\
 \underline{-256x^2 - 512x} \\
 512x + 1024 \\
 \underline{-512x - 1024} \\
 0
 \end{array}$$

$$R = x^9 - 2x^8 + 4x^7 - 8x^6 + 16x^5 - 32x^4 + 64x^3 - 128x^2 + 256x - 512$$

Rayter

$$9 \div (X^3 - 5x - 1) \div (X - 3)$$

$$\begin{array}{r} X^2 + 3x + 4 \\ X-3 \overline{) X^3 - 5x - 1} \\ \underline{X^3 + 3x^2} \\ 3x^2 - 5x - 1 \\ \underline{3x^2 + 9x} \\ 4x - 1 \\ \underline{4x + 12} \\ 11 \end{array}$$

$$R = X^2 + 3x + 4 \left(\frac{11}{X-3} \right)$$

$$10 = (R^4 S^3 T^4 U)^5$$

$$R = R^{20} S^{15} T^{20} U^5$$

$$11 = (A^3 B^4 C^2 D^5)^6$$

$$R = A^{18} B^{24} C^{12} D^{30}$$

$$12 = (3x^6 y^3 z^2)(3x^6 y^3 z^2)$$

$$R = 9x^{12} y^6 z^4$$

$$13 = (2/5 a^2 b - 4/3 ab - 4)(3/2 ab^2)$$

$$R = \frac{6}{10} a^2 b^2 - \frac{12}{6} a^2 b^2 - \frac{12}{2} ab^3$$

$$\frac{3}{5} a^2 b^2 - 2 a^2 b^2 - 6 ab^3$$

$$14 = (3x^3 + 2y^2)(3x^3 + 2y^2)^2$$

$$(3x^3 + 2y^2)(3x^3 + 2y^2)(3x^3 + 2y^2)$$

$$9x^9 + 6x^6 y^3 + 6x^6 y^3 + 4y^6(3x^3 + 2y^2)$$

$$27x^9 + 18x^6 y^3 + 18x^6 y^3 + 12x^3 y^6$$

$$R = 18x^9 + 12x^6 y^3 + 12x^6 y^3 + 8y^6$$

Rayter

$$15 = \left(\frac{2}{6}a^3 + \frac{1}{3}b^2\right) \left(\frac{2}{6}a^3 + \frac{1}{3}b^2\right)$$

$$\frac{4}{36}a^6 + \frac{2}{18}a^3b^2$$

$$\frac{2}{18}a^3b^2 + \frac{1}{9}b^4$$

$$R = 4a^6 + 48a^3b^2 + 4b^4$$