



Mi Universidad

probleuario

Nombre del Alumno...Emiliano Almaraz Tejada

Nombre del tema ... división de monomios

Parcial...primer

Nombre de la Materia...algebra

Nombre del profesor...juan José Ojeda Trujillo

Nombre de la Licenciatura... bachillerato en recursos humanos

Cuatrimestre... primer

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

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

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

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

$$2. (\frac{2}{3}a^2b^2 - \frac{1}{4}a^2b^4 + \frac{5}{6}ab^4 - \frac{2}{5}b^5) \div (-\frac{1}{2}ab^2)$$

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

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

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

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

$$\begin{array}{r} x^2 - 5x + 6 \\ x^2 + 3x - 2 \overline{) x^4 - 2x^3 - 11x^2 + 30x - 20} \\ \underline{-x^4 + 3x^3 + 7x^2} \\ -5x^3 - 4x^2 + 30x \\ \underline{+8x^3 + 15x^2 - 10x} \\ +6x^2 + 20x - 20 \\ \underline{-6x^2 - 18x + 12} \\ 2x - 8 \end{array}$$

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

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

$$\begin{array}{r}
 x^4 + x^3 + 3x^2 - 3 \\
 x^2 - x + 3 \overline{) x^6 + 5x^4 - 2x \\
 \underline{-x^6 + x^5 - 3x^4} \\
 + x^5 + 2x^4 \\
 \underline{+ x^5 + x^4 - 3x^3} \\
 + 3x^4 - 3x^3 + 3x^2 \\
 \underline{- 3x^4 + 3x^3 - 6x^2} \\
 - 3x^2 - 2x \\
 \underline{+ 3x^2 - 3x + 9} \\
 1x + 9
 \end{array}$$

$$R = x^4 + x^3 + 3x^2 - 3 + \frac{1x + 9}{x^2 - x + 3}$$

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

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

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

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

$$\begin{array}{r} x^4 + x^3 + 3x^2 + 6x - 20 \\ x^2 - x + 3 \overline{) x^6 + 3x^2 - 2x } \\ \underline{-x^6 + x^5 - 3x^4} \\ x^5 + 2x^4 \end{array}$$

$$\begin{array}{r} 3x^4 + 3x^3 + 3x^2 \\ \underline{-3x^4 + 3x^3 - 9x^2} \end{array}$$

$$\begin{array}{r} 6x^3 - 6x^2 - 2x \\ \underline{-6x^3 + 6x^2 - 18x} \end{array}$$

$$\begin{array}{r} 20x^2 - 20x + 20 \\ \underline{-20x^2 + 20x - 20} \\ 0 \end{array}$$

$$R = x^4 + x^3 + 3x^2 + 6x - 20$$

$$\left(\frac{-20x^2 + 20}{x^2 - x + 3} \right)$$

$$7 = (2x^4 - 2x^3 + 3x^2 + 5x + 10) \div (x + 2)$$

$$\begin{array}{r} 2x^3 + 6x^2 + 9x + 23 \\ x + 2 \overline{) 2x^4 - 2x^3 + 3x^2 + 5x + 10} \\ \underline{-2x^4 - 4x^3} \end{array}$$

$$\begin{array}{r} 6x^3 + 3x^3 \\ \underline{-6x^3 - 12x^2} \end{array}$$

$$\begin{array}{r} -9x^2 + 5x \\ \underline{+4x^2 + 18x} \end{array}$$

$$\begin{array}{r} 23x + 10 \\ \underline{-23x - 43} \\ -33 \end{array}$$

$$R = 2x^3 + 6x^2 + 9x + 23 \left(\frac{-33}{x+2} \right)$$

$$11 = (-a^3 b^4 c^2 d^5)^6 (-a^3 b^4 c^2 d^5)$$

$$a^6 b^8 c^4 d^{10} (-a^3 b^4 c^2 d^5)$$

$$-a^9 b^{12} c^6 d^{15} (-a^3 b^4 c^2 d^5)$$

$$a^{12} b^{16} c^8 d^{20} (-a^3 b^4 c^2 d^5)$$

$$a^{15} b^{20} c^{10} d^{25} (-a^3 b^4 c^2 d^5)$$

$$-a^{18} b^{24} c^{12} d^{30}$$

$$R = -a^{18} b^{24} c^{12} d^{30}$$

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

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

$$13 = \left(\frac{2}{5} a^2 b - \frac{4}{3} a b - 4\right) \left(\frac{3}{2} a b^2\right)$$

$$\frac{3}{10} a^3 b^3 - \frac{12}{9} a^2 b^3 - \frac{12}{4} a b^2$$

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

$$9x^6 + 6x^3 y^2$$

$$6x^3 y^2 + 4y^4$$

$$9x^6 + 12x^3 y^2 + 4y^4 (3x^2 + 2y^3)$$

$$27x^8 + 36x^5 y^2 + 12x^2 y^4 + 18x^6 y^2 + 24x^3 y^2 + 8y^6$$

$$27x^8 + 36x^5 y^2 + 12x^2 y^4 + 18x^6 y^2 + 24x^3 y^2 + 8y^6$$

$$R = 27x^8 + 18x^6 y^2 + 36x^5 y^2 + 24x^3 y^2 + 12x^2 y^4 + 8y^6$$

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

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

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

$$\frac{4}{36} a^6 + 1 a^3 b^2 + \frac{1}{9} b^4$$

$$\frac{2}{18} + \frac{2}{18} = \frac{6+6}{6} = 1$$