



PROBLEMARIO

Nombre del estudiante

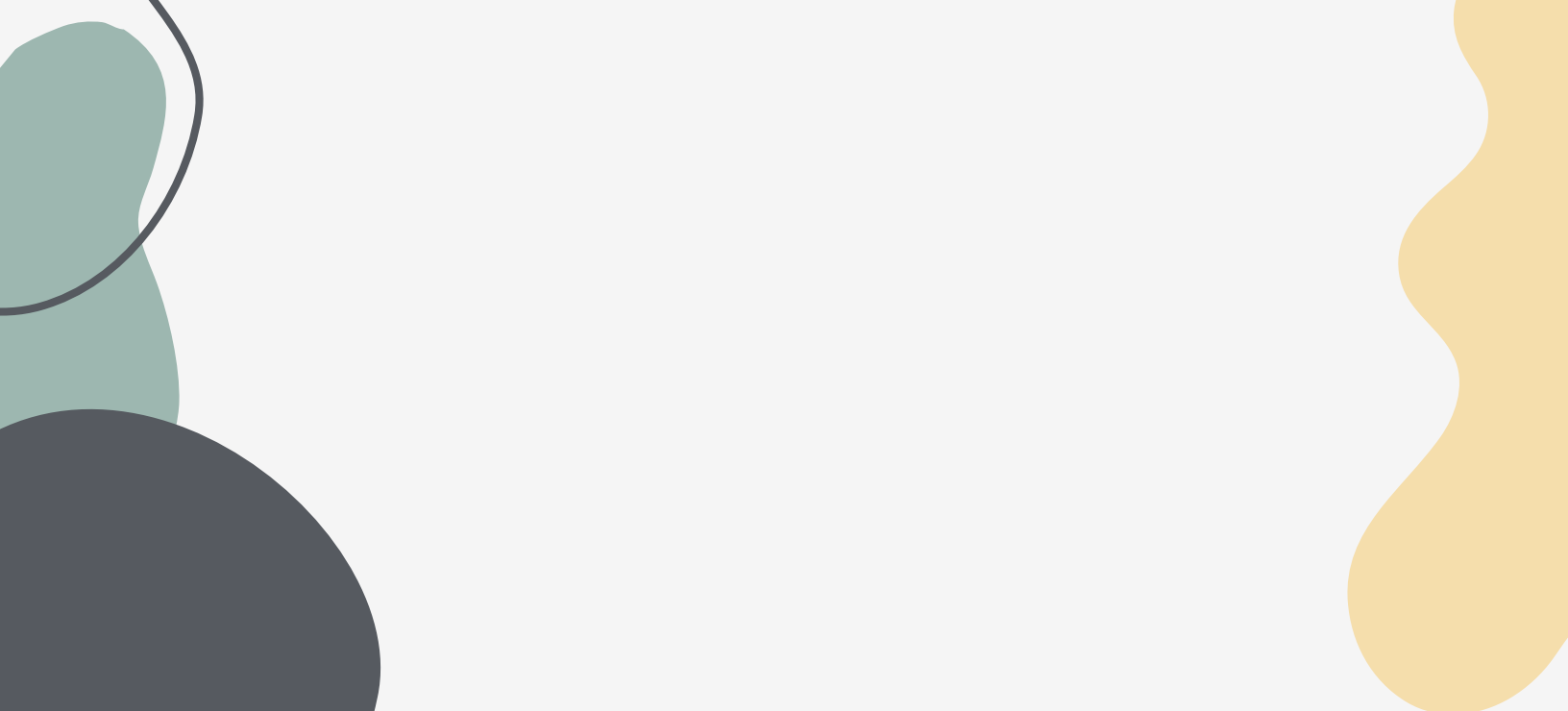
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Nombre del docente

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Materia

Algebra



Problemar 10

22 11 25

Scribe

Jose Manuel Uco. Rdrgr.

$$1: (3a^3 + 5a^2 - 4) : (3a)$$

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

$$2: (\frac{2}{3}a^2b^2 - \frac{1}{4}a^2b^4 + \frac{5}{8}ab^4 - \frac{3}{5}b^5) : (-\frac{1}{2}ab^2)$$

$$\frac{\frac{2}{3}a^2b^2}{-\frac{1}{2}ab^2} - \frac{\frac{1}{4}a^2b^4}{-\frac{1}{2}ab^2} + \frac{\frac{5}{8}ab^4}{-\frac{1}{2}ab^2} - \frac{\frac{3}{5}b^5}{-\frac{1}{2}ab^2} \quad R = -\frac{3a}{4} + \frac{1}{2}ab^2 - \frac{5b^2}{3} + ab^3$$

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

$$3: (x^4 - 2x^3 - 11x^2 + 30x - 20) : (x^2 + 3x - 2)$$

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

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

$$4: (x^6 + 5x^4 + 3x^2 - 2x) : (x^2 - x + 3)$$

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

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

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

Este problema es igual que el numero 3

$$\text{Resultado: } x^2 - 5x + 6 \left(\frac{2x - 8}{x^2 + 3x - 2} \right)$$

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

Este problema es igual al que el numero 4

$$\text{Resultado: } x^4 + x^3 + 3x^2 - 6 + \left(\frac{-8 + 18}{x^2 - x + 3} \right)$$

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

$$\begin{array}{r} 2x^3 - 6x^2 + 13x + 35 \\ x+2 \overline{) 2x^4 - 2x^3 + 3x^2 + 5x + 10} \\ \underline{-2x^4 - 4x^3} \\ -6x^3 + 3x^2 \\ \underline{6x^3 + 12x^2} \\ 15x^2 + 5x \\ \underline{-15x^2 + 30x + 10} \\ 35x + 10 \\ \underline{35x - 70} \\ -60 \end{array}$$

$$R = 2x^3 - 6x^2 + 15x + 35 + \left(\frac{-60}{x+2} \right)$$

$$8. (x^{10} - 1024) \div (x + 2)$$

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

$$\begin{array}{r}
 32x^5 + 0x^4 \\
 - 32x^5 - 64x^4 + 0x^3 \\
 \hline
 64x^4 + 128x^3 + 0x^2 \\
 - 128x^3 - 256x^2 \\
 \hline
 - 256x^2 + 0x \\
 + 512x + 1024 \\
 - 512x - 1024 \\
 \hline
 \end{array}$$

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

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

$$\begin{array}{r}
 x^2 + 3x + 1 \\
 x - 3 \overline{) x^3 + 0x^2 - 5x - 1} \\
 \underline{x^3 + 3x^2} \\
 3x^2 - 5x \\
 \underline{3x^2 + 6x} \\
 -x - 1 \\
 \underline{-x - 3} \\
 2
 \end{array}$$

$$R = x^2 + 3x + 1 + \left(\frac{2}{x-3} \right)$$

$$10. (R^4 S^3 T^2 U)^3 = R^{12} S^9 T^6 U^3 \quad 15 = \left(\frac{2}{3}a^3 + \frac{1}{3}b^2 \right) \left(\frac{2}{3}a^3 + \frac{1}{3}b^2 \right) \\ h = \frac{1}{9}a^6 + \frac{2}{9}a^3b^2 + \frac{1}{9}b^4$$

$$11. (-a^3 b^4 c^2 d^5)^6 = -a^{18} b^{24} c^{12} d^{30}$$

$$12. (-3x^6 y^3 z^2)(-3x^6 y^3 z^2) R = 9x^{12} y^6 z^4$$

$$13. \left(\frac{2}{5}a^2b - \frac{4}{3}ab - 4 \right) \left(\frac{3}{2}ab^3 \right) R = \frac{3}{5}a^3b^3 - 2a^2b^3 - 6ab^2$$

$$14. (3x^3 + 2y^4)(3x^3 + 2y^3)^2 R = 9x^6 + 12x^3y^3 + 4y^5$$