



GUÍA REPASO ÁLGEBRA

I. Calcular:

- $2 \times (3 + (4 - 1)) + (8 - (2 - 5)) \times 3$
- $10 - (8 - 3) \times 2 + (5 - 2) \times (7 - 3)$
- $(9 - 2) \times (7 - 3) + (4 - (1 - 8)) \times 2$
- $\left(2 - \frac{5}{4}\right) \times \left(3 - \frac{1}{2}\right) + \frac{3}{2}$
- $10 - \left(5 - \frac{3}{7}\right) \times \left(2 + \frac{1}{3}\right)$
- $\left(\frac{7}{5} - 2\right) \times \left(4 - \left(1 + \frac{8}{9}\right)\right)$

II. Factorizar:

- $12x^3 + 18x^2$
- $9a^2 - 16b^2$
- $x^2 + 10x + 25$
- $xy + xz + ay + az$
- $x^2 + 2xy + y^2 - a^2 + 2ab - b^2$
- $x^2 - 7x + 12$
- $x^3 + 8$
- $4x^3 - 36x$
- $x^3 - 3x^2 + x - 3$
- $x^3 - 4x^2 - x + 4$
- $3x^2 + 5x - 2$
- $(2x + 1)^2 - y^2$

III. Simplificar al máximo:

- $\frac{2a}{a^2 - m^2} \cdot \frac{(m - a)^2}{m^2 + am}$
- $\frac{2x^2 + 3x}{2x^2 + 5x + 3} : \frac{8x^2 - 2x}{8x^2 + 6x}$
- $\frac{1}{x-1} - \frac{2}{x+1} + \frac{3}{x^2-1}$
- $\left(\frac{x}{y} - 1\right) \left(\frac{y^2}{x^2 - y^2}\right)$

IV. Racionalizar el denominador:

- $\frac{1}{\sqrt{2} + \sqrt{3}}$
- $\frac{\sqrt[7]{3}}{\sqrt[7]{2^3}}$
- $\frac{3}{\sqrt{\sqrt{5} - 2}}$
- $\frac{5}{2\sqrt{5} - 3\sqrt{2}}$