

ALGEBRA





HELICOASESORIA TOMO I



NORMAS DE CONVIVENCIA EN LA SALA DE REUNÍON



Apague su MICROFONO



Toda comunicación es mediante el CHAT



Está prohibido cualquier comentario fuera del lugar en el chat



Obtener el valor de

$$\mathbf{A} = \frac{(-5)(3) - (4)(3)}{(-2)(-3) + 3}$$

Recordar

Leyes de signos



$$(-3)(-2) = +6$$

$$(+3)(-2) = -6$$

$$(-3)(+2) = -6$$

$$(+3)(+2) = +6$$

Resolución:

$$A = \frac{-15 - 12}{+6 + 3}$$

$$A = \frac{-27}{9}$$

$$\therefore A = -3$$



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Problema 2

Calcular el valor de N - M

M =
$$(-3) + ($$

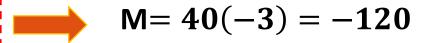
$$N = -2 - 2 - 2 - 2 \dots - 2$$

Recordar

$$(-4) + (-4) + (-4) = -4 - 4 - 4 = -12$$

$$3(-4) = -12$$

Resolución3





Nos piden N - M

$$N - M = -20 - (-120)$$

$$N - M = -20 + 120$$

$$\therefore N-M=100$$



Halle el resultado de E^3

$$E = \frac{2}{7} + \frac{3}{5} + \frac{9}{7} + \frac{1}{5} - \frac{4}{7} + \frac{1}{5}$$

Recordar

Fracciones Homogéneas

$$\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$$

Resolución:

$$E = \frac{2}{7} + \left(\frac{3}{5}\right) + \left(\frac{9}{7}\right) + \left(\frac{1}{5}\right) - \left(\frac{4}{7}\right) + \left(\frac{1}{5}\right)$$

$$E = \frac{2+9-4}{7} + \frac{3+1+1}{5}$$

$$E=\frac{7}{7}+\frac{5}{5}$$

$$E=1+1 \implies E=2$$

$$\therefore E^3 = 2^3 = 8$$

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Problema 4

Calcular el valor de

$$J = \frac{2}{5} + \frac{2}{3} - \frac{1}{4}$$

Recordar

$$\frac{3}{2} - \frac{2}{5} + \frac{1}{10}$$

mcm(2; 5; 10) = 10

$$\frac{15-4+1}{10} = \frac{12}{10} = \frac{6}{5}$$

Resolución

$$J = \frac{2}{5} + \frac{2}{3} - \frac{1}{4}$$





$$J = \frac{24 + 40 - 15}{60}$$

$$\therefore J = \frac{49}{60}$$

Calcular el valor de

$$\mathbf{M} = \frac{\frac{2}{3} + \frac{1}{5}}{2 + \frac{1}{5}}$$

Recordar

$$\frac{\frac{3}{4}}{\frac{5}{2}} = \frac{3 \times 2}{4 \times 5} = \frac{3}{10}$$

Resolución:

$$M = \underbrace{\frac{\frac{2}{3} + \frac{1}{5}}{2 + \frac{1}{5}}}_{2 + \frac{1}{5}}$$

$$M = \frac{\frac{2.5 + 3.1}{15}}{\frac{2.5 + 1}{5}} = \left(\frac{\frac{13}{15}}{\frac{11}{5}}\right)$$

$$M = \frac{13 \times 5}{15 \times 11} = \frac{13}{3.11}$$

$$\therefore M = \frac{13}{33}$$



Calcule el valor de 2x

$$\frac{x+1}{5}=\frac{2x-5}{8}$$

Recordar

Regla del aspa

$$\frac{x+2}{3}$$
 $=$ $\frac{x+1}{2}$

$$2(x+2)=3(x+1)$$

$$2x + 4 = 3x + 3$$

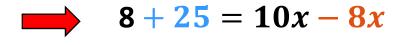
$$1 = x$$

Resolución

$$\frac{x+1}{5} = \frac{2x-5}{8}$$

Multiplicando en aspa

$$8x + 8 = 10x - 25$$



$$33 = 2x$$

$$\therefore 2x = 33$$



Calcule el valor de 10x

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

Recordar

Fracción

Mixta

$$\frac{x}{2} + \frac{1}{2} = \frac{x+2}{2}$$

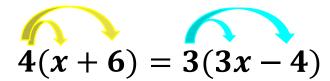
Resolución:

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

Aplicamos fracción mixta

$$\frac{x+6}{3} = \frac{3x-4}{4}$$





$$4x + 24 = 9x - 12$$



$$36 = 5x$$

$$\therefore 10x = 72$$



Calcular el valor de "m" en:

$$\frac{m}{5} + \frac{m}{3} + \frac{m}{2} + \frac{m}{6} = 144$$

Recordar

$$\frac{3}{2} - \frac{2}{5} + \frac{1}{10}$$

$$mcm(2; 5; 10) = 10$$

$$\frac{15-4+1}{10} = \frac{12}{10} = \frac{6}{5}$$

Resolución:

$$\frac{m}{5} + \frac{m}{3} + \frac{m}{2} + \frac{m}{6} = 144$$



m. c. m (5; 3; 2; 6) = 30

Luego

$$\frac{12m + 20m + 30m + 10m}{30} = 144$$

$$\frac{72m}{30}=144$$

$$72m = 144 \times 30$$



$$m = 2 \times 30$$

$$m = 60$$



La edad de Angie esta dado por el valor de x en:

$$2(x+5) + 3(x+8) = 4x + 66$$

Mañana conocerá a su primo
Carlos quien es 5 años mayor
que ella, calcule la suma de
ambas edades.

Recordar

$$4(x+6) = 4x+24$$

Resolución:

$$2(x+5)+3(x+8) = 4x + 66$$

$$2x + 10 + 3x + 24 = 4x + 66$$
$$5x + 34 = 4x + 66$$

$$5x-4x = 66 - 34$$

Luego

$$x = 32$$



Angie tiene 32 años



Carlos tiene 37 años

 \therefore suma de edades = 69



Calcule el perímetro del siguiente terreno rectangular





perimetro = 2(base + altura)



$$perimetro = 2[(10-2x) + (3x+2)]$$

$$perimetro = 2[12+x]$$

$$perimetro = 24 + 2x$$



 $\therefore perimetro = 2x + 24$