

1º C

03/04/20

$$27) \frac{2x-6}{2} = x_{1/2} - 5_{1/2}$$

$$\frac{2x-6}{2} = \frac{2x}{2} - \frac{10}{2}$$

Simplificamos los denominadores

$$2x - 6 = 2x - 10$$

$$2x - 2x = -10 + 6$$

$$0x = -4$$

No tiene solución

$$28) \frac{x}{2} + 7_{1/2} = \frac{4x}{3} + 8_{1/2}$$

$$\frac{3x}{6} + \frac{42}{6} = \frac{8x}{6} + \frac{48}{6}$$

$$3x + 42 = 8x + 48$$

$$3x - 8x = 48 - 42$$

$$\textcircled{-5}x = 6$$

$$x = \frac{6}{-5}$$

$$29) \frac{x+1}{2} + \frac{x+4}{5} - \frac{x+3}{4} = 1 \quad | \quad 30) \frac{x+1}{6} - \frac{x-4}{3} = 2 + \frac{1}{2}$$

¡Cuidado!

$$29) \frac{x+1}{2} + \frac{x+4}{5} - \frac{x+3}{4} = \frac{1}{1}$$

$$\frac{10(x+1)}{20} + \frac{4(x+4)}{20} - \frac{5(x+3)}{20} = \frac{20}{20}$$

Simplificamos los denominadores

$$10(x+1) + 4(x+4) - 5(x+3) = 20$$

$$\rightarrow 10x + 10 + 4x + 16 - 5x - 15 = 20$$

$$10x + 4x - 5x = 20 - 10 - 16 + 15$$

$$9x = 9$$

$$x = \frac{9}{9}$$

$$x = 1$$

$$30) \frac{x+1}{6} - \frac{x-4}{3} = 2\frac{1}{1} + \frac{1}{2}$$

$$\frac{x+1}{6} - \frac{2(x-4)}{6} = \frac{12}{6} + \frac{3}{6}$$

$$x+1 - 2(x-4) = 12 + 3$$

$$x+1 - 2x + 8 = 12 + 3$$

$$x - 2x = 12 + 3 - 1 - 8$$

$$-1x = 6$$

$$x = \frac{6}{-1}$$

$$x = -6$$

$$\frac{x+1}{6} - \frac{2x-8}{6} = \frac{12}{6} + \frac{3}{6}$$

$$x+1 - 2x + 8 = 12 + 3$$

$$31) \frac{2x}{3} + \frac{5}{4} + \frac{x}{6} - \frac{7}{3} = 0$$

$$\frac{8x}{12} + \frac{15}{12} + \frac{2x}{12} - \frac{84}{12} = \frac{0}{12}$$

$$8x + 15 + 2x - 84 = 0$$

$$8x + 2x = -15 + 84$$

$$10x = 69$$

$$x = \frac{69}{10}$$

$$\begin{aligned} 3 &= 3 \\ 4 &= 2^2 \\ 6 &= 2 \cdot 3 \end{aligned}$$

$$\begin{aligned} \text{m.c.m}(3, 4, 6) &= \\ &= 2^2 \cdot 3 = 12 \end{aligned}$$

$$32) \frac{x+1}{8} - \frac{x+1}{3} + \frac{x+3}{5} = 0$$

$$33) \frac{2x+3}{4} - \frac{143}{6} = \frac{9x-5}{8} - 2x$$

$$32) \frac{x+1}{8} - \frac{x+1}{3} + \frac{x+3}{5} = 0 \quad \text{m.c.m}(8,3,5) = 120$$

$$\frac{15(x+1)}{120} - \frac{40(x+1)}{120} + \frac{24(x+3)}{120} = \frac{0}{120}$$

$$15(x+1) - 40(x+1) + 24(x+3) = 0$$

$$15x + 15 - 40x - 40 + 24x + 72 = 0$$

$$15x - 40x + 24x = -15 + 40 - 72$$

$$\textcircled{-1}x = -47$$

$$x = \frac{-47}{-1}$$

$$x = 47$$

$$33) \frac{2x+3}{4} - \frac{143}{6} = \frac{9x-5}{8} - 2x \quad | \cdot 24$$

$$\frac{6(2x+3)}{24} - \frac{572}{24} = \frac{3(9x-5)}{24} - \frac{48x}{24}$$

$$6(2x+3) - 572 = 3(9x-5) - 48x$$

$$12x + 18 - 572 = 27x - 15 - 48x$$

$$12x - 27x + 48x = -15 - 18 + 572$$

$$\textcircled{33}x = 539$$

$$x = \frac{539}{33}$$