

1º B

03/04/20

$$30) \frac{x+1}{6} - \frac{x-4}{3} = 2\frac{1}{2} + \frac{1}{2} \quad || \quad 31) \frac{2x}{3} + \frac{5}{4} + \frac{x}{6} - 7 = 0$$

m.c.m(6, 3, 2) = 6

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

Simplificamos los denominadores

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

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

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

$$-1x = 6$$

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

$$x = -6$$

$$\frac{2(x+1)}{12} - \frac{4(x-4)}{12} = \frac{24}{12} + \frac{6}{12}$$

$$2(x+1) - 4(x-4) = 24 + 6$$

$$2x + 2 - 4x + 16 = 24 + 6$$

$$2x - 4x = 24 + 6 - 2 - 16$$

$$-2x = 12$$

$$x = \frac{12}{-2} = -6$$

$$31) \frac{2x}{3} + \frac{5}{4} + \frac{x}{6} - 7\frac{1}{2} = 0\frac{1}{2}$$

m.c.m(3, 4, 6) = 12

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

Simplificamos los denominadores

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

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

$$10x = 69$$

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

¡Cuidado!

$$32) \frac{x+1}{8} - \frac{x+1}{3} + \frac{x+3}{5} = 0\frac{1}{2}$$

m.c.m(8, 3, 5) =

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

m.c.m(4, 6, 8) = 24

4 · 6 · 8 = 192 (también vale de común denominador)

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

Simplificamos los denominadores

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

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

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

$$-1x = -47$$

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

$$x = 47$$

$$33) \frac{2x+3}{4} - \frac{143}{6} = \frac{9x-5}{8} - 2x \frac{1}{2}$$

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

Simplificamos los denominadores

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

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

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

$$33x = 545$$

$$x = \frac{545}{33}$$

$$34) 10x \frac{1}{1} - \frac{95-10x}{2} = \frac{10x-55}{2} \quad \parallel \quad 35) \frac{x+3}{2} - \frac{143}{3} = \frac{2x-5}{9} - x$$

$$\frac{20x}{2} - \frac{(95-10x)}{2} = \frac{10x-55}{2}$$

$$20x - (95-10x) = 10x - 55$$

$$20x - 95 + 10x = 10x - 55$$

$$20x + 10x - 10x = -55 + 95$$

$$20x = 40$$

$$x = \frac{40}{20}$$

$$x = 2$$

$$35) \frac{x+3}{2} - \frac{143}{2} = \frac{2x-5}{9} - x_{1/3}$$

$$\frac{9(x+3)}{18} - \frac{1287}{18} = \frac{2(2x-5)}{18} - \frac{18x}{18}$$

$$9(x+3) - 1287 = 2(2x-5) - 18x$$

$$9x + 27 - 1287 = 4x - 10 - 18x$$

$$9x - 4x + 18x = -10 - 27 + 1287$$

$$(23)x = 1250$$

$$x = \frac{1250}{23}$$