

	Nombre:	SOLUCIONES		Nota
	Curso:		Control Ecuaciones I	
	Fecha:		Ecuaciones de Primer Grado	

Resuelve las siguientes ecuaciones de primer grado

$$1) 5 - 3x = 1 - x + 9 - 3x \Rightarrow -3x + 3x + x = 1 + 9 - 5 \Rightarrow x = 5$$

$$2) x - 18 + x - 7 = 25 - 5x \Rightarrow x + x + 5x = 25 + 7 + 18 \Rightarrow 7x = 50 \Rightarrow x = \frac{50}{7}$$

$$3) x - 10 = 3x - 7 + 8x - 13 \Rightarrow x - 3x - 8x = 10 - 7 - 13 \Rightarrow -10x = -10 \Rightarrow x = \frac{-10}{-10} \Rightarrow x = 1$$

$$4) 75 - 37x + 25 - 12x = 318 + x - 10 + 2x \Rightarrow -37x - 12x - x - 2x = 318 - 10 - 25 - 75$$

$$\Rightarrow -52x = 208 \Rightarrow x = \frac{208}{-52} \Rightarrow x = -4$$

$$5) 20 = 2x - (10 - 4x) \Rightarrow 20 = 2x - 10 + 4x \Rightarrow 20 + 10 = 2x + 4x \Rightarrow 30 = 6x$$

$$\Rightarrow x = \frac{30}{6} \Rightarrow x = 5$$

$$6) 2(5 - x) = 19 - 3(x + 5) \Rightarrow 10 - 2x = 19 - 3x - 15 \Rightarrow 3x - 2x = 19 - 15 - 10 \Rightarrow x = -6$$

$$7) 5x - 3(2x - 1) - (x + 5) = 1 - 2(3x + 5) \Rightarrow 5x - 6x + 3 - x - 5 = 1 - 6x - 10$$

$$\Rightarrow 5x - 6x - x + 6x = 1 - 10 + 5 - 3 \Rightarrow 4x = -7 \Rightarrow x = \frac{-7}{4}$$

$$8) 2(3x + 2) = 4[2x - 5(x - 2)] \Rightarrow 6x + 4 = 4(2x - 5x + 10) \Rightarrow 6x + 4 = 8x - 20x + 40$$

$$\Rightarrow 6x - 8x + 20x = 40 - 4 \Rightarrow 18x = 36 \Rightarrow x = \frac{36}{18} \Rightarrow x = 2$$

$$9) \frac{3}{2}x + 8 = \frac{3}{5}x - 1 \Rightarrow \frac{3x}{2} + 8 = \frac{3x}{5} - 1 \xrightarrow{\text{m.c.m.}(2,5)=10} \frac{15x}{10} + \frac{80}{10} = \frac{6x}{10} - \frac{10}{10} \Rightarrow \frac{15x}{10} + \frac{80}{10} = \frac{6x}{10} - \frac{10}{10}$$

$$\Rightarrow 15x + 80 = 6x - 10 \Rightarrow 15x - 6x = -80 - 10 \Rightarrow 9x = -90 \Rightarrow x = \frac{-90}{9} \Rightarrow x = -10$$

$$10) \frac{x-2}{4} - \frac{2x+6}{3} = 0 \xrightarrow{\text{m.c.m.}(3,4)=12} \frac{3(x-2)}{12} - \frac{4(2x+6)}{12} = 0 \Rightarrow \frac{3(x-2)}{12} - \frac{4(2x+6)}{12} = 0$$

$$\Rightarrow 3(x-2) - 4(2x+6) = 0 \Rightarrow 3x - 6 - 8x - 24 = 0 \Rightarrow 3x - 8x = 6 + 24$$

$$\Rightarrow -5x = 30 \Rightarrow x = \frac{30}{-5} \Rightarrow x = -6$$

$$B) \frac{2x-1}{3} - \frac{5x-4}{7} = \frac{x+5}{2} - 5 \xrightarrow{\text{m.c.m.}(2,3,7)=42} \frac{14(2x-1)}{42} - \frac{6(5x-4)}{42} = \frac{21(x+5)}{42} - \frac{5 \cdot 42}{42} \Rightarrow$$

$$\Rightarrow \frac{14(2x-1)}{42} - \frac{6(5x-4)}{42} = \frac{21(x+5)}{42} - \frac{5 \cdot 42}{42} \Rightarrow 14(2x-1) - 6(5x-4) = 21(x+5) - 210 \Rightarrow$$

$$\Rightarrow 28x - 14 - 30x + 24 = 21x + 105 - 210 \Rightarrow 10 - 2x = 21x - 105 \Rightarrow 10 + 105 = 21x + 2x \Rightarrow$$

$$\Rightarrow 115 = 23x \Rightarrow x = \frac{115}{23} \Rightarrow x = 5$$