



CENTRO DE ELECTRICIDAD ELECTRÓNICA Y TELECOMUNICACIONES
TALLER COMPLEMENTARIO SISTEMAS NUMÉRICOS

TALLER No.3: Ecuaciones de Primer Grado con una Incógnita

GRUPO DE FORMACIÓN: ADSI G2 1193362 NOTA: _____

COMPETENCIA: matemáticas

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1. Determine el valor de la variable en cada una de las ecuaciones de primer grado.

a). $\frac{2}{3}x + 1 = 5$

b). $\frac{7x-9}{3} = 18$

c). $\frac{-2x+12}{6} + 8 = 5$

d). $\left(\frac{-2x+12}{6} + 8\right)^2 = 25$

e). $\left(\frac{-2x+12}{6} + 4\right)^2 - 3 = -2$

f). $\sqrt{\frac{7}{2}x+4} + 8 = 4$

g). $\sqrt{\frac{7}{2}x+4} + 4 - 1 = 3$

h). $\frac{4x}{5} - \frac{1}{4} = \frac{15}{4}$

i). $\frac{\frac{4x}{5} - 1}{2} = \frac{15}{2}$

Solucion ecuaciones

1) a) $\frac{2}{3}x + 1 = 5$

$$2x + 1 = 5 \times 3$$

$$2x + 1 = 15$$

$$2x = 15 - 1$$

$$x = \frac{14}{2}$$

$$x = 7$$

b) $\frac{7}{3}x - 0 = 18$

$$7x - 0 = 18 \times 3$$

$$7x - 0 = 54$$

$$7x = 54 + 0$$

$$7x = 54$$

$$x = \frac{54}{7}$$

$$x = 9$$

c) $\frac{-2x + 12}{6} + 8 = 5$

$$\frac{-2x + 12}{6} = 5 - 8$$

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

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

$$-2x + 12 = -3 \times 6$$

$$-2x + 12 = -18$$

$$-2x = -18 - 12$$

$$-2x = -30$$

$$x = \frac{-30}{-2}$$

$$x = 15$$

d) $\sqrt{\frac{7+4}{2}} + 4 - 1 = 3^4$

$$\frac{7+4}{2} + 4 - 1 = 3^4$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

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$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$\frac{7+4}{2} + 4 - 1 = 81$$

$$d) \sqrt{\left(\frac{-2x+12+8}{6}\right)^2} = \sqrt{25}$$

$$\sqrt{\left(\frac{-2x+12+8}{6}\right)^2} = \sqrt{25}$$

$$\frac{-2x+12+8}{6} = 5$$

$$\frac{-2x+12+8}{6} = 5-8$$

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

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

$$-2x+12 = -18$$

$$-2x = -18 - 12$$

$$-2x = -30$$

$$x = \frac{30}{2}$$

$$x = 15$$

$$f) \sqrt{\frac{1}{2}x+4} + 8 = 4$$

$$\sqrt{\frac{1}{2}x+4} = 4-8 = -4$$

$$\frac{1}{2}x+4 = 16$$

$$\frac{1}{2}x+4 = 16 \times 2$$

$$\frac{1}{2}x+4 = 32$$

$$\frac{1}{2}x = 32-4$$

$$\frac{1}{2}x = 28$$

$$\frac{1}{2}x = 28$$

$$x = \frac{28 \times 2}{1} = 56$$

$$x = 56$$

$$= 17.1$$

$$h) \frac{4x}{5} - \frac{1}{4} = \frac{15}{14}$$

$$\frac{4x}{5} = \frac{15}{14} + \frac{1}{4} = \frac{60+14}{56}$$

$$= \frac{74}{56}$$

$$\frac{4x}{5} = \frac{37}{28}$$

$$x = \frac{37}{28} \times \frac{5}{4} = \frac{37}{28} \times \frac{5}{4} = \frac{185}{112}$$

$$x = \frac{185}{112}$$

$$x = 1.65$$

$$i) \frac{4x}{5} - \frac{1}{4} = \frac{15}{2}$$

$$\frac{4x}{5} - \frac{1}{4} = \frac{15 \times 2}{2} = \frac{15}{1} \times \frac{1}{2}$$

$$\frac{4x}{5} - \frac{1}{4} = \frac{15}{4}$$

$$\frac{4x}{5} = \frac{15}{4} + \frac{1}{4} = \frac{15+1}{4} = \frac{16}{4} = 4$$

$$x = 4 \div \frac{4}{5} = \frac{4}{1} \times \frac{5}{4} = \frac{20}{4} = 5$$

$$x = 5$$