

MODELAMIENTO DE SISTEMAS

FLORENCIA GARCIA 2C

1- G1:

$$MC = 2 \text{ (50\% de 4)}$$

$$HC = 2 \text{ (50\% de 4)}$$

$$MNC = \frac{1}{3} 6 = 2$$

$$HNC = 4$$

$$TC = 4$$

$$TNC = 6$$

$$T = 10$$

G2

$$MC = 4$$

$$HC = 6 \text{ (10-4)}$$

$$MNC = 5$$

$$HNC = \frac{1}{4} T = 5$$

$$TC = 10$$

$$TNC = 10 \text{ (20-10)}$$

$$T = 2 \text{ (T61)} = 20$$

a) G1:

$$\text{Hombres} : 2 + 4 = 6$$

$$\text{Mujeres} : 2 + 2 = 4$$

$$\text{conductores} : 4$$

$$\text{no conductores} : 6$$

G2:

$$\text{Hombres} : 6 + 5 = 11$$

$$\text{Mujeres} : 4 + 5 = 9$$

$$\text{conductores} = 10$$

$$\text{no conductores} = 10.$$

b) % TC respecto TC G1 y G2

$$TC = 4 + 10 = 14$$

$$14 \rightarrow 100\%$$

$$MC = 2 + 4 = 6$$

$$6 \rightarrow 42,86\%$$

c) NC respecto Total de conductores.

$$NC = 6 + 10 \rightarrow 16$$

$$\frac{16}{14} = \frac{8}{7}$$

$$C = 4 + 10 \rightarrow 14$$

$$\frac{16}{14} = \frac{8}{7}$$

d) % HNC respecto del T62.

$$HNC = 4 + 5 = 9$$

$$20 \rightarrow 100\%$$

$$T62 = 20$$

$$9 \rightarrow 45\%$$

e) HNC respecto TM G1 y G2

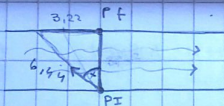
$$HNC = 2 + 5 = 7$$

$$\frac{7}{13}$$

$$TM \rightarrow 2 + 2 + 4 + 5 = 13$$

$$\frac{7}{13}$$

2: a)



$$v = 3,22 \text{ km/h}$$

$$\text{Sen}(x) = \frac{3,22}{6,44} = 0,5 \quad x = 30^\circ$$

b) $h^2 = c^2 + v^2$

$$(6,44)^2 = (3,22)^2 + c^2$$

$$41,47 = 10,37 + c^2$$

$$31,1 = c^2$$

$$c = 5,58 \text{ km/h}$$

$$d = r \cdot v$$

$$6,44 \text{ km} = r \cdot 5,58 \text{ km/h}$$

$$r = 1,15 \text{ h}$$

c) 3,22 km río abajo y regresar.

$$V_{\text{en bajada}} = 6,44 + 3,22 \text{ (km/h)}$$

$$v_{\text{en bajada}} = 9,66 \text{ km/h}$$

$$V_{\text{en subida}} = 6,44 - 3,22 \text{ (km/h)}$$

$$V_{\text{en subida}} = 3,22 \text{ km/h}$$

$$d = v \cdot T$$

$$3,22 \text{ km} = 9,66 \text{ km/h} \cdot T$$

$$0,34 \text{ h} = T$$

20 min en bajar

$$3,22 \text{ km} = 3,22 \frac{\text{km}}{\text{h}} \cdot T$$

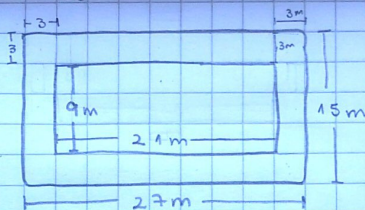
$$1 \text{ h} = T$$

Se tardará 1 hora 20 min en bajar y subir.

3- a) $\frac{L}{A} = \frac{7}{3}$ $L = 21$ metros.

$4 \rightarrow 3$
 $21 \rightarrow x$

Ancho = 9



b) área pintada

$$27 \cdot 15 = 405 \text{ m}^2$$

$$21 \cdot 9 = 189 \text{ m}^2$$

$$405 - 189 = 216 \text{ m}^2$$

c) 10 m^2 por galón
 $216 \text{ m}^2 : 10 \text{ m}^2 = 21,6 \text{ galones} \cdot 2 = 43,2 \text{ galones}$

Se necesitarán 43,2 galones