

Col. Lt. Z egros

Prueba Modelamiento de
Sistemas

Pregunta n° 1:

a)	Grupo 1		Total 1	Grupo 2		Total 2
	Hombres	Mujeres		hombres	Mujeres	
Conducen	2	2	4	6	4	10
No Conducen	4	2	6	5	5	10
			10			20

$$b) \frac{6}{14} \cdot 100 = 42,9\%$$

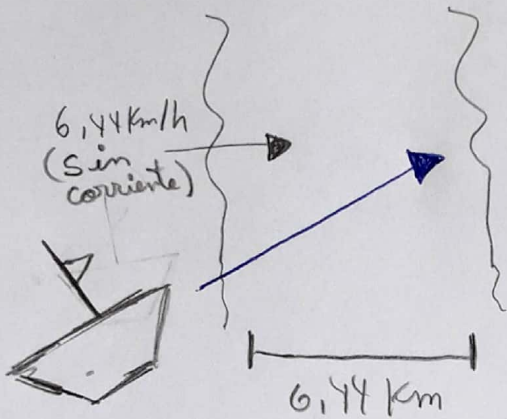
$$c) 16 : 14 = 8 : 7$$

$$d) \frac{4}{20} \cdot 100 = 20\%$$

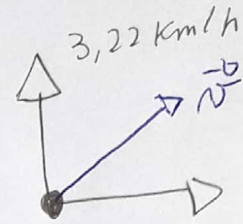
$$e) 7 : 13$$

Pregunta n° 2:

a)



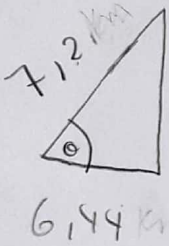
$3,22 \text{ km/h}$



$$(\vec{v})^2 = (3,22)^2 + (6,44)^2$$

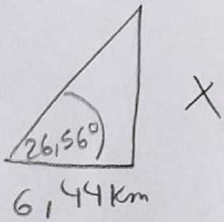
$$\vec{v} = 7,2 \text{ km/h}$$

b)



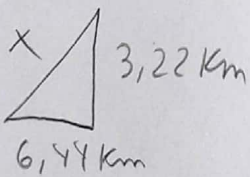
$$\sin \theta = \frac{3,22}{6,44}$$

$$\theta = 26,56^\circ$$



$$\text{Tg}(26,56) = \frac{X}{6,44}$$

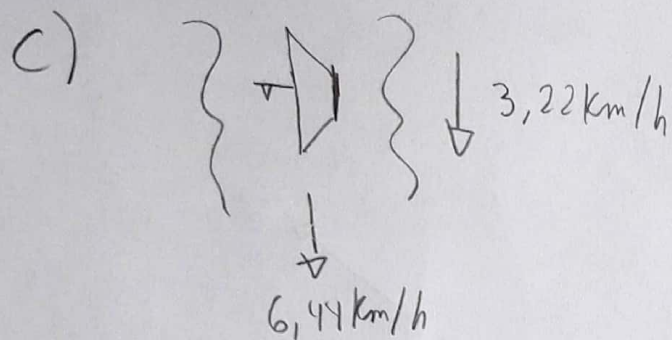
$$X = 3,22 \text{ km}$$



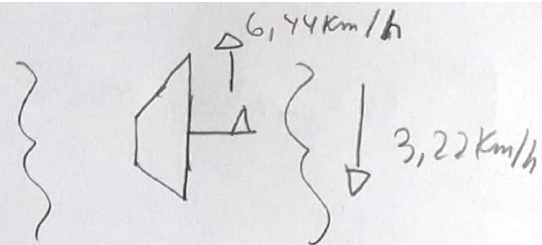
$$(X)^2 = (3,22)^2 + (6,44)^2$$

$$X = 7,2 \text{ km}$$

$$t = \frac{d}{v} = \frac{7,2 \text{ km}}{7,2 \text{ km/h}} = 1 \text{ h}$$



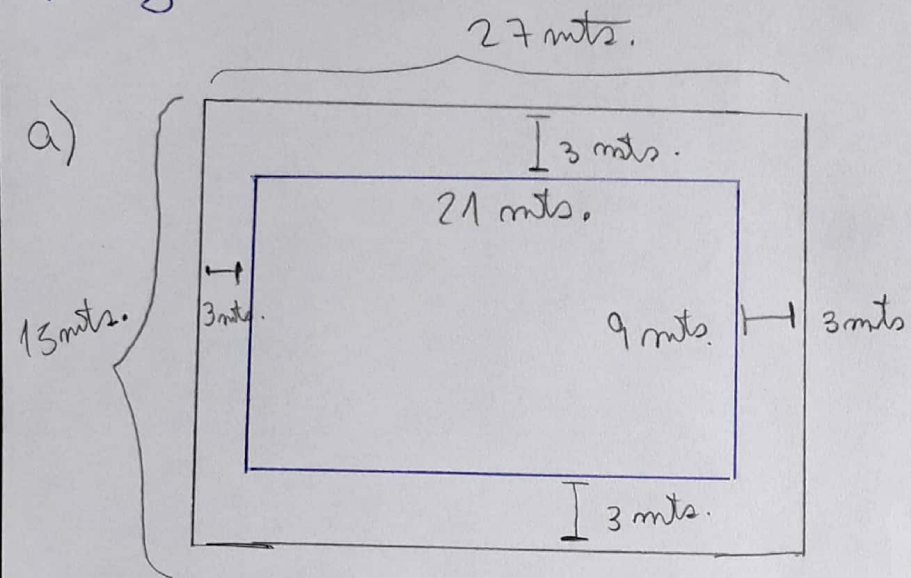
$$\begin{array}{r} 6,44 \\ + 3,22 \\ \hline 9,66 \text{ km/h} \end{array} \quad \left. \begin{array}{l} t = \frac{3,22 \text{ km}}{9,66 \text{ km/h}} \\ t = 20 \text{ min} \end{array} \right\}$$



$$\begin{array}{r} 6,44 \\ - 3,22 \\ \hline 3,22 \text{ km/h} \end{array} \quad \left. \begin{array}{l} t = \frac{3,22 \text{ km}}{3,22 \text{ km/h}} \\ t = 1 \text{ hora} \end{array} \right\}$$

En ir y Volver se demorará 1 hora y 20 min.

Pregunta n° 3:



$$\frac{7}{3} = \frac{21}{x}$$

$$x = 9 \text{ mts.}$$

b) Área del rectángulo = $27 \text{ m.} \cdot 15 \text{ m} = 405 \text{ m}^2$

Área sin pintar = $21 \text{ m.} \cdot 9 \text{ m} = \underline{189 \text{ m}^2}$

Pintar: $216 \text{ m}^2 //$

c)

1 gal	→	10 m^2
X	→	216 m^2

$$X = 21,6 \cdot 2 (2 \text{ manos}) = 43,2 \text{ galones} //$$

Se requieren 43,2 galones para pintar 216 m^2 .