EV. Nº1. Mod. Sistemas.

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Pregunta n° 1:

A:	Conduct.	No cond.	T
♂	2	4	6
♀	2	$\frac{1}{3} \cdot 6 = 2$	4
T.	4	6	$\frac{x}{2} = 10$

B:	Conduct	No cond.	T
♂	6	$\frac{1}{4}x = 5$	11
♀	4	5	9
T	10	10	$x = 20$

a) V

b) $\% \frac{♀ \text{cond}_{A \cup B}}{T \text{cond}_{A \cup B}} = \frac{(2+4)}{(4+10)} = \frac{6}{14} \cdot 100 = 42,857\%$

c) $\frac{\text{NO cond}_{A-B}}{T \text{cond}_{A-B}} \quad \frac{(6+10)}{(4+10)} = \frac{16}{14} = \frac{8}{7}$

$\rightarrow \text{NO cond}_{(A-B)} : T\text{cond}_{(A-B)} = 8:7.$

d) $\frac{\% ♂ \text{NO cond}_{(A-B)}}{T \text{pers. (B)}} = \frac{(4+5)}{20} = \frac{9}{20} \cdot 100 = 45,00\%$

e) $\frac{♀ \text{NO cond}_{(A-B)}}{T ♀ (A-B)} = \frac{(2+5)}{(4+9)} = \frac{7}{13}$

$\rightarrow ♀ \text{NO cond}_{(A-B)} : T ♀_{(A-B)} = 7:13.$

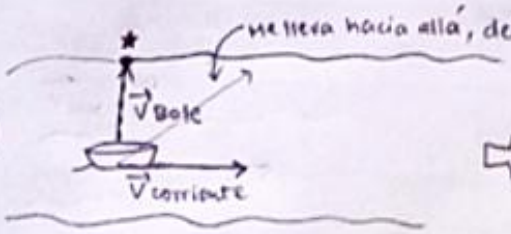
Pregunta n°2.

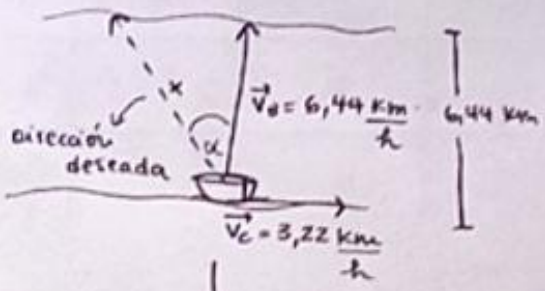
Datos

$6{,}44 \frac{Km}{h}$ → Abajo

$3{,}22 \frac{Km}{h}$ → Río.

a)





b) $x = \sqrt{6{,}44^2 - 3{,}22^2}$

$x = 5{,}577 \left[\frac{Km}{h}\right]$

$\text{sen}\,\alpha = \frac{CO}{CA} = \frac{3{,}22}{6{,}49} = 0{,}5$

↳ $\alpha = 30° + 90°$
$120°$

El bote debe apuntar al NW

$V = \frac{d}{t}$ } $\frac{6{,}44 \text{ Km}}{5{,}577 \frac{Km}{h}} = t \rightarrow 1{,}1547$ horas

(1 h 09 min 16,92 seg)

c)

(3,22 km a favor de la corriente)
+ (3,22 km en contra de la corriente)

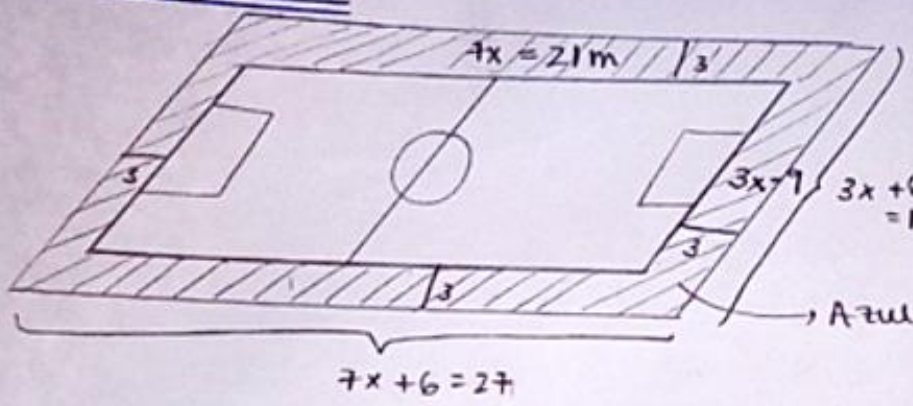
$V = \frac{d}{t}$ } $t = \frac{d}{V}$

$t_{\text{A favor}} = \frac{3{,}22 \text{ Km}}{(6{,}44 \frac{Km}{h} + 3{,}22 \frac{Km}{h})} = 0{,}\overline{3} = \sim 20$ minutos

$t_{\text{en contra}} = \frac{3{,}22 \text{ Km}}{(6{,}44 \frac{Km}{h} - 3{,}22 \frac{Km}{h})} = 1 \text{ hora}$

Total = 20 minutos + 1 hora = 1 h 20 min.

Pregunta n°3.



$7x = 21$
$x = 3$

$(24)(12) - (21)(9)$

Se desea pintar $A_F = A_{Total} - A_{cancha}$.

Largo = 21
Ancho = 9

$A_F = (3x+6)(7x+6) - (3x)(7x)$

$A_F = (21x^2 + 9x + 21x + 9) - 21x$

$A_F = 21x^2 + 9x + 9$

$A_F = 21(9) + 9(3) + 9$

$A_F = 225.$

$A_F = A_T - A_C$
$A_F = (27)(15) - (21)(9)$
$A_F = 405 - 189$
$A_F = 216$ ✓

$\frac{10\ m^2}{gal}$ → con 1 galón pinto $10\ m^2$ por mano

$\frac{216\ m^2\ (cant.\ total)}{10\ m^2/gal} = 21,6\ gal\ (necesito)$

$\sim 22\ gal \times 2\ manos$

R: Necesitaré 43,2 galones (~ 44 galones) (es mejor que me sobre pintura) para 2 capas (manos).