TRIBUTOS

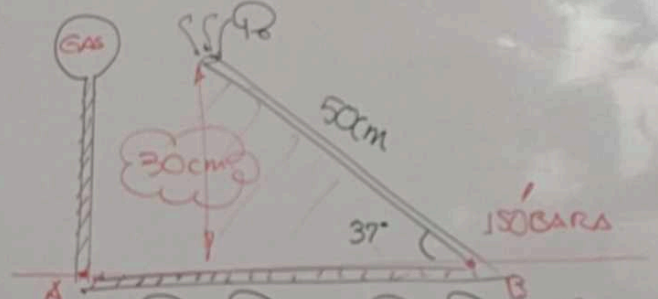
4

$P_{MANOMETRO} = P_{MEDIO} - P_{EXTERNA}$

$P_{MAN} = 1.25atm - 1.07atm$

$= 0.18atm$

2



$P_A = P_B$

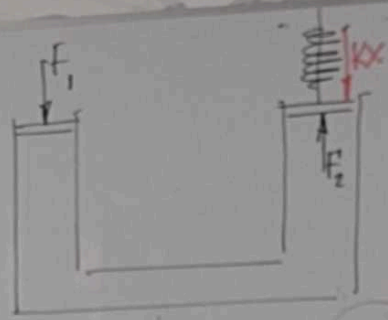
$P_{CAS} + P_{ACEITE} = P_0$

$P_0 - P_{CAS} = P_{ACEITE}$

$P_0 - P_{CAS} = D_{ACEITE} g h_{ACEITE}$

$= 800\,(10)\,30 \cdot 10^{-2}$

$2400\,Pa = 2.4\,kPa$



$K = 900\,N/m$

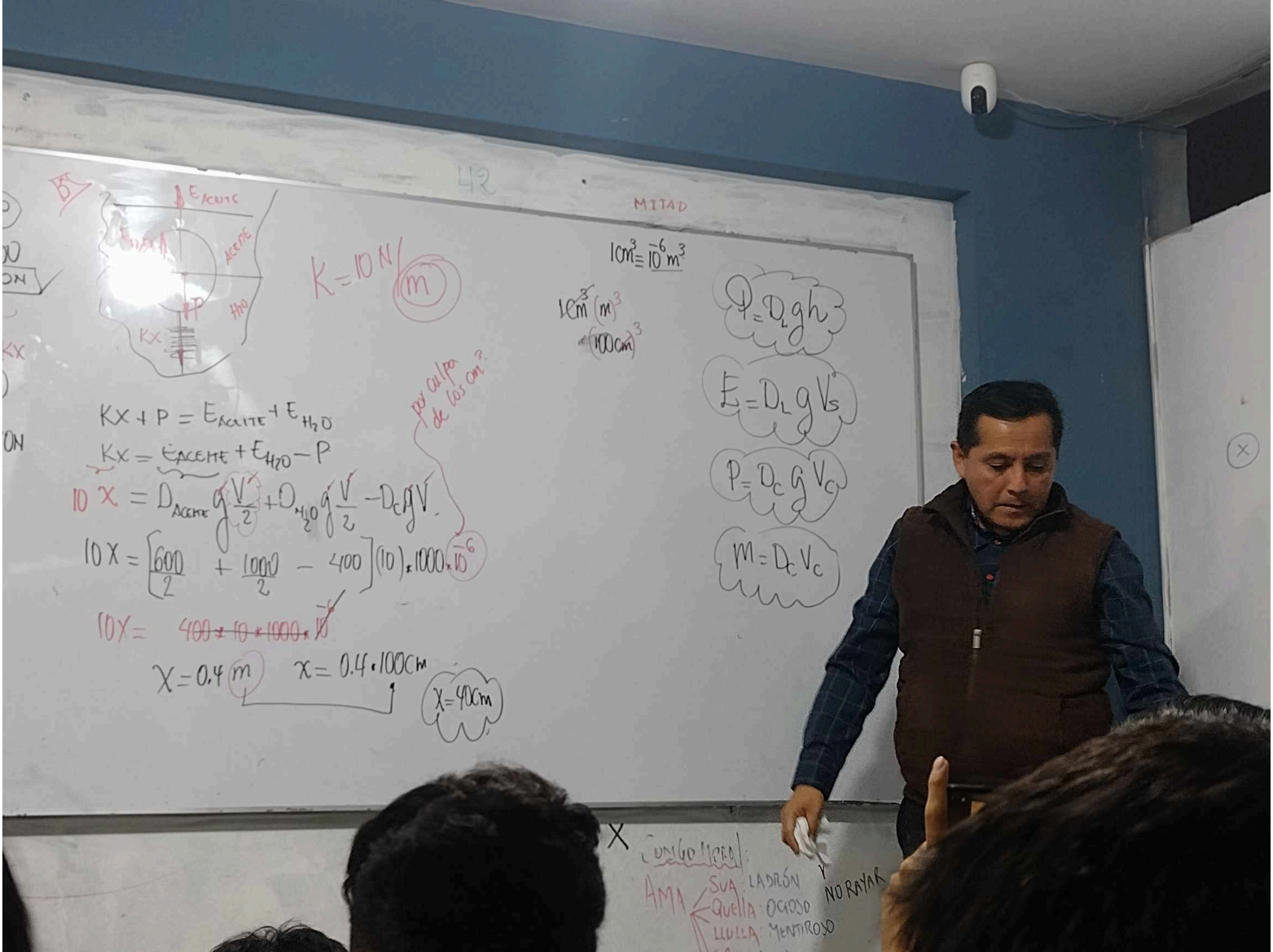
$\frac{F_1}{A_1} = \frac{F_2}{A_2}$

$\frac{300}{200\,u^2} = \frac{F_2}{600\,u^2}$

$F_2 = 900$

$Kx = 900$

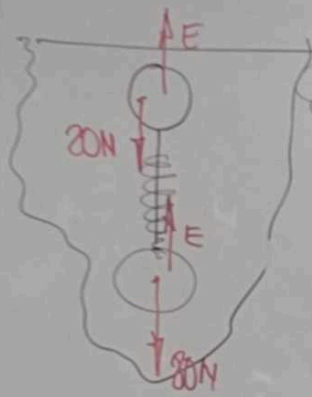
$x = 1\,m$


42
MITAD
E_{ACEITE}
ACEITE
H_2O
P
KX
K = 10 N
m
$1cm^3 = 10^{-6} m^3$
$1cm^3 (m)^3$
$(100cm)^3$
$P = D_L g h$
$E = D_L g V_s$
$P = D_c g V_c$
$m = D_c V_c$
$KX + P = E_{ACEITE} + E_{H_2O}$
$KX = E_{ACEITE} + E_{H_2O} - P$
$10X = D_{ACEITE} g \frac{V}{2} + D_{H_2O} g \frac{V}{2} - D_c g V$
por culpa de los cm³
$10X = \left[\frac{600}{2} + \frac{1000}{2} - 400\right](10) \times 1000 \times 10^{-6}$
$10X = 400 \times 10 \times 1000 \times 10^{-6}$
$X = 0.4\ m$
$x = 0.4 \times 100cm$
$X = 40cm$
CUIDADO MAMA:
AMA
SUA LADRÓN
QUELLA OCIOSO
LLULLA MENTIROSO
Y
NO RAYAR

(TOSCANO)

42

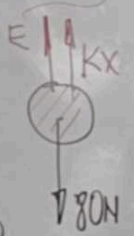
MITAD



$\Sigma F_y = 0$

$2E = 100$

$E = 50N$



$\Sigma F_y = 0$

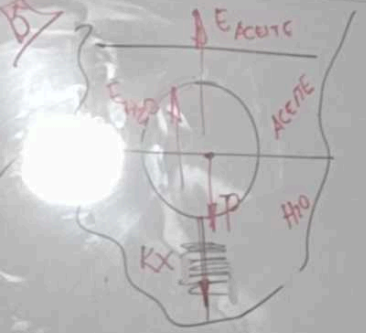
$Kx + E = 80$

50

$Kx = 30$

$10x = 30$

$x = 3cm$



$K = 10N/m$

$Kx + P = E_{ACEITE} + E_{H_2O}$

$Kx = E_{ACEITE} + E_{H_2O} - P$

por culpa de los cm?

$10x = D_{ACEITE}\, g \frac{V}{2} + D_{H_2O}\, g \frac{V}{2} - D_c g V$

$10x = \left[\frac{600}{2} + \frac{1000}{2} - 400\right](10) \times 1000 \times 10^{-6}$

$10x = 400 \times 10 \times 1000 \times 10^{-6}$

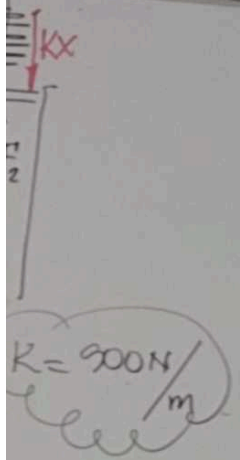
$x = 0.4\,m$ $\quad x = 0.4 \times 100cm$

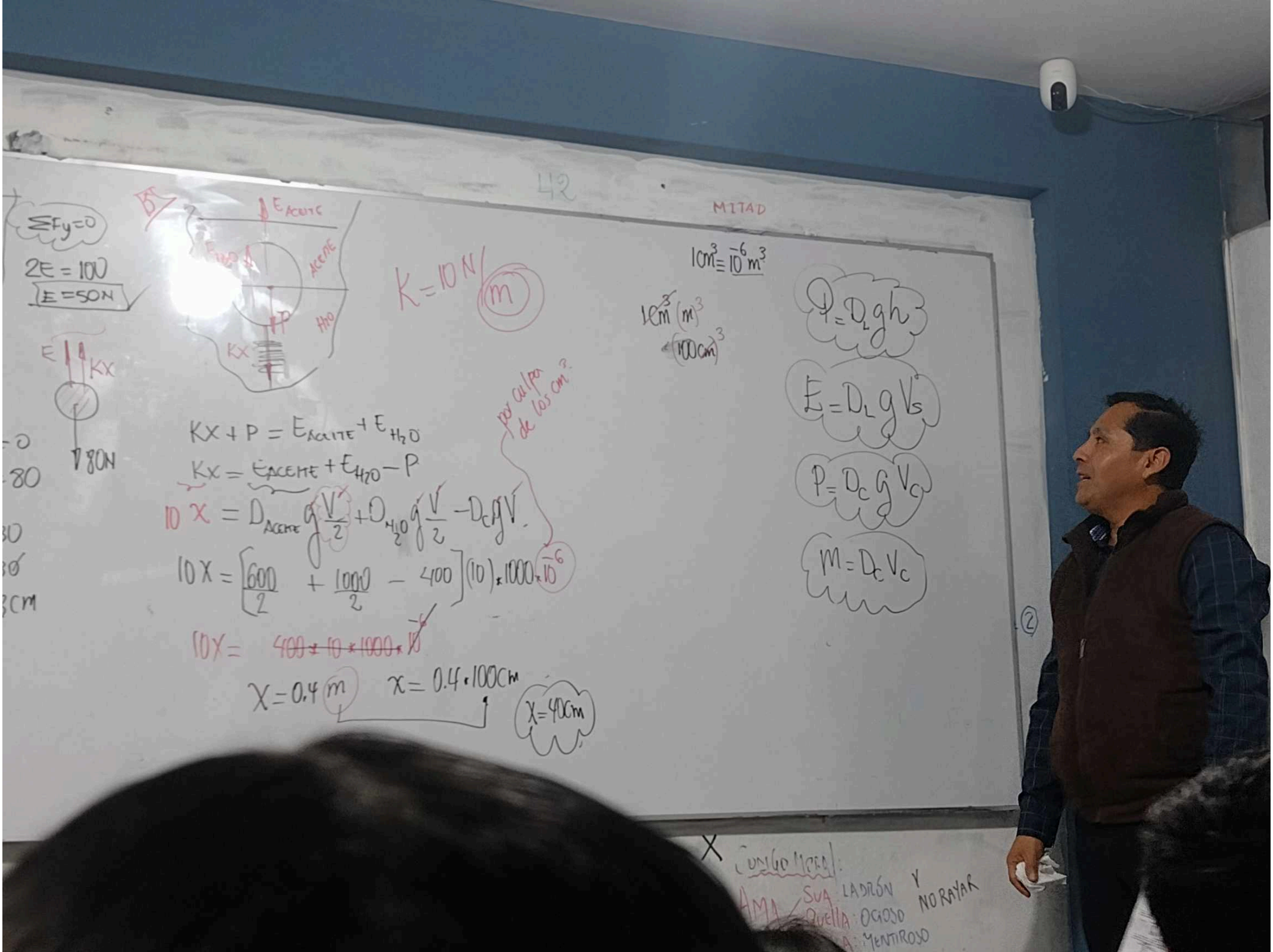
$x = 40cm$

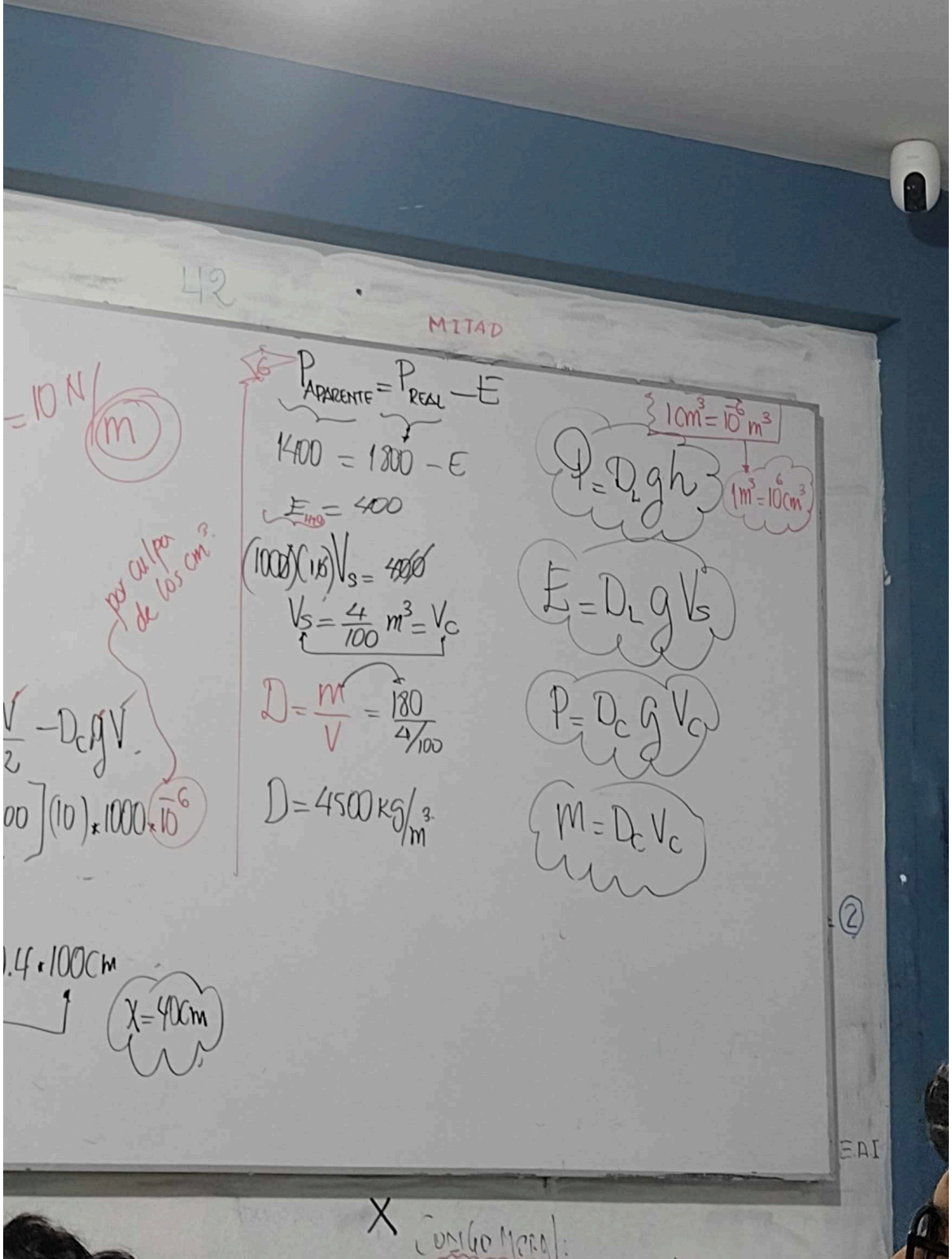
$1cm^3 = 10^{-6} m^3$

$1cm^3 \,(m)^3$

$(100cm)^3$




42
MITAD
$\sum F_y = 0$
$2E = 100$
$E = 50N$
E_{ACEITE}
E_{H_2O}
ACEITE
H_2O
P
Kx
K = 10 N
m
$1cm^3 = 10^{-6} m^3$
$1cm^3 \cdot \frac{(m)^3}{(100cm)^3}$
$P = D_L g h$
$E = D_L g V_S$
$P = D_C g V_C$
$m = D_C V_C$
E
Kx
80N
$Kx + P = E_{ACEITE} + E_{H_2O}$
$Kx = E_{ACEITE} + E_{H_2O} - P$
por culpa de los cm^3
$10x = D_{ACEITE} g \frac{V}{2} + D_{H_2O} g \frac{V}{2} - D_C g V$
$10X = \left[\frac{600}{2} + \frac{1000}{2} - 400\right](10) \cdot 1000 \cdot 10^{-6}$
$10X = 400 \cdot 10 \cdot 1000 \cdot 10^{-6}$
$X = 0.4\,m$
$x = 0.4 \cdot 100cm$
$x = 40cm$
CONSEJO MORAL:
AMA SUA LADRÓN Y NO RAYAR
QUEJA: OCIOSO
A: MENTIROSO


42
MITAD
$P_{APARENTE} = P_{REAL} - E$
$1400 = 1800 - E$
$E_{H_2O} = 400$
$(1000)(10)V_s = 400$
$V_s = \frac{4}{100}\ m^3 = V_c$
$D = \frac{m}{V} = \frac{180}{4/100}$
$D = 4500\ kg/m^3$
$1cm^3 = 10^{-6}\ m^3$
$1m^3 = 10^6 cm^3$
$P = D_L g h$
$E = D_L g V_s$
$P = D_c g V_c$
$m = D_c V_c$
$= 10\ N$
m
por culpa de los cm^3.
$-D_c g V$
$00](10) * 1000 * 10^{-6}$
$.4 * 100cm$
$x = 40cm$
②
EAI
X

TRIBUTOS

Kerosene

$P_{A_{KEROSENE}} = P_{REAL} - E_{KEROSENE}$

$60 + P_{A_{ACEITE}} = P_{REAL} - E_{KEROSENE}$

$60 + P_R - E_{ACEITE} = P_R - E_{KEROSENE}$

$60 = E_{ACEITE} - E_{KEROSENE}$

$60 = (500 + D_K)(10)V_C - D_K 10 V_C$

$60 = (500)(10)V_C$

$V = \frac{60}{5\times10^3}$

$V = 12\times10^{-3}\ m^3$

$V = 12\times10^{-3}\cdot10^6\ cm^3$

$V = 12000\ cm^3$

$d_{BLOQUE} = 72\ kg/m^3$

$a = g\tan\theta$

$a = 10\times\frac{7}{24}\ m/s^2$

$F = m.a$

$T = D_c V_c . a$

$T = (72)\left(\frac{2}{10}\right)10\times\frac{7}{24}$

$T = 42N$

$D_{madera} = 0.8\ g/cm^3$

$g_{efectiva}$

$E = P$

$D_L g_{efectiva} V_S = mg$

$D_L(g-a)V_S = D_c V_c g$

$D_L g - D_L a = D_c g$

$D_L g - D_c g = D_L a$

$a = \left(\frac{D_L - D_c}{D_L}\right)g$

$a = \left(\frac{1000-800}{1000}\right)10$

$a = 2\ m/s^2$

$P_x = P_y$

$P_{ALCOHOL} + P_{H_2O} + P_{Hg} =$

$D_{H_2O} g h_{H_2O} +$

$P_{ALCOHOL} + P_{\circ}$

$D_{Hg} g h_{Hg} = D_{ALCOH}$

$13.6\ h_{Hg} = D_A$

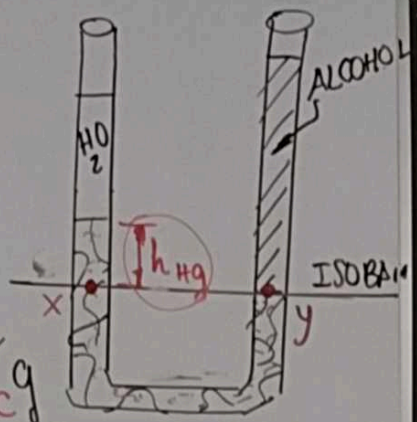
ROBUSTOS: A

MI KAYAK (6K)

TOSCANO

(TOSCANO)

10)



$= mg$

$V_s = D_c V_c g$

$a = D_c g$

$= D_L a$

g

$\frac{800}{0}$ 10

$a = 2 m/s^2$

$P_x = P_y$

$P_0 + P_{H_2O} + P_{Hg} =$

$D_{H_2O} g h_{H_2O} +$

11)

$P_{ALCOHOL} + P_0$

$D_{Hg} g h_{Hg} = D_{ALCOHOL} g h_{ALCOHOL}$

$13.6\, h_{Hg} = D_{ALCOHOL} \frac{m_{ALCOHOL}}{D_{ALCOHOL} A_B} - D_{H_2O} \times \frac{m_{H_2O}}{D_{H_2O} A_B}$

$13.6\, h_{Hg} = \frac{62.8 - 31.4}{A_B}$

$h_{Hg} = \frac{31.4}{\pi (1/2)^2 \cdot 13.6}$

$h_{Hg} = \frac{10 \times 4}{13.6}$

$h_{Hg} = \frac{40}{13.6} = 2.94\ cm$

42

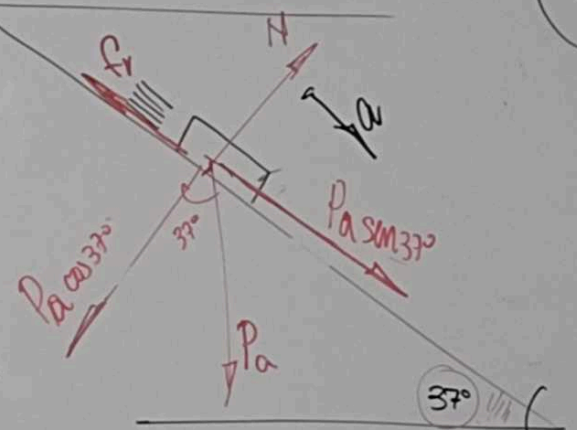
MITAD

$$13.6\, h_{Hg} = \frac{62.8 - 31.4}{A_B}$$

$$h_{Hg} = \frac{31.4}{\pi (1/2)^2 \cdot 13.6}$$

$$h_{Hg} = \frac{10 \times 4}{13.6}$$

$$h_{Hg} = \frac{40}{13.6} = 2.94\ cm$$



$$F = ma.$$

$$P_a \sin 37° - f_r = ma$$

$$(P_R - E)\sin 37° - N.N \quad (P_a \cdot \cos 37°)$$

$$(P_R - E)\sin 37° - \frac{1}{2}(P_R - E)\cos 37° = ma$$

$$(P_R - E)\left(\frac{3}{5} - \frac{2}{5}\right) = ma$$

$$\left(D_c g V_c - D_L g V_s\right)\frac{1}{5} = \underbrace{D_c V_c}_{m}\, a$$

$$\left(\frac{D_c - D_L}{D_c}\right)\frac{g}{5} = a$$

$$\left(\frac{3-1}{3}\right)\frac{g}{5} = a$$

$$a = \frac{4}{3}\ m/s^2$$

$$a = 1.33\ m/s^2$$

$$-\frac{D_{H_2O} * M_{H_2O}}{D_{H_2O} A_B}$$

②

TRIBUTOS

EN A

$F_c = m a_c$

$T_A + mg = m a_c$

$T_A = m a_c - mg$

EN B

$F_c = m.a_c$

$T_B = m a_c$

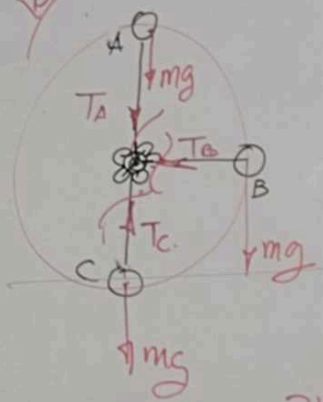
EN C

$F_c = m a_c$

$T_C - mg = m a_c$

$T_C = m a_c + mg$

15

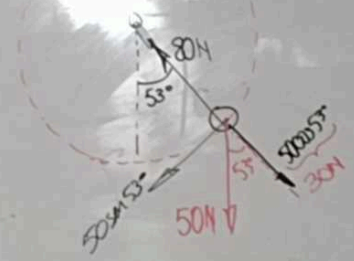


$T_A + T_B + T_C = 3ma_c$

$T_A + T_B + T_C = 3(4)\frac{(10)^2}{2}$

$T_A + T_B + T_C = 600N$

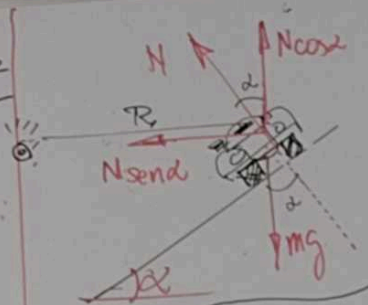
14



$F_c = m a_c$

$80 - 30 = (5)\frac{V^2}{1}$

$V = \sqrt{10}\ m/s$



$\Sigma F_y = 0$

$N\cos\alpha = mg$

$N = \frac{mg}{\cos\alpha}$

$F_c = m.a_c$

$N\operatorname{sen}\alpha = m\frac{V^2}{R_t}$

$\frac{mg}{\cos\alpha}.\operatorname{sen}\alpha = \frac{mV^2}{R_t}$

$\tan\alpha = \frac{V^2}{Rg} = \frac{(20)^2}{1000(10)}$

$\tan\alpha = 0.04$

$\frac{72.5}{18} = 20\ m/s$

TOSCANO

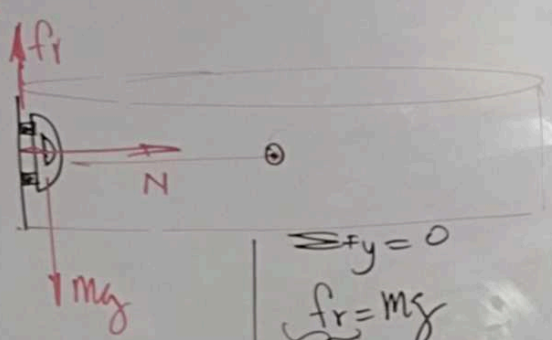
ROBUSTOS: A

OSCANO)

42

MITAD

18)



$\Sigma F_c = m.a_c$

$N = ma_c$

$\frac{mg}{\mu} = m\frac{V^2}{R}$

$V = \sqrt{\frac{gR}{\mu}}$

$\Sigma F_y = 0$

$f_r = mg$

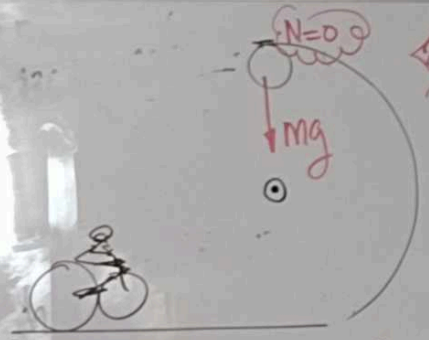
$\mu.N = mg$

$N = mg/\mu$

$V = \sqrt{\frac{10.20}{1/2}}$

$V = 20 m/s$

$\frac{20 \times 18}{5} = 72 km/h$



$F_c = m.a_c$

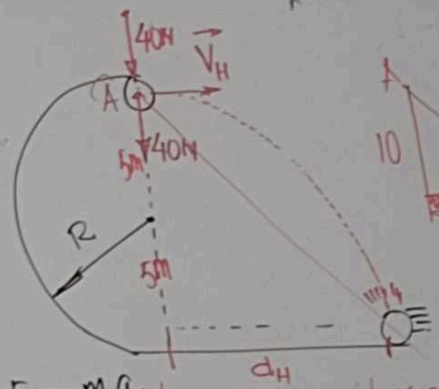
$mg = m\frac{V^2}{R}$

$V = \sqrt{gR}$

$\sqrt{10(1.6)}$

$V = 4 m/s$

21)



$F_c = ma_c$

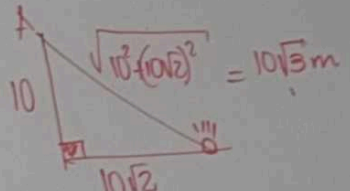
$80 = \frac{4V^2}{5}$

$V_H = 10 m/s$

MRU

$d_H = V_H t$

$d_H = 10\sqrt{2} m$



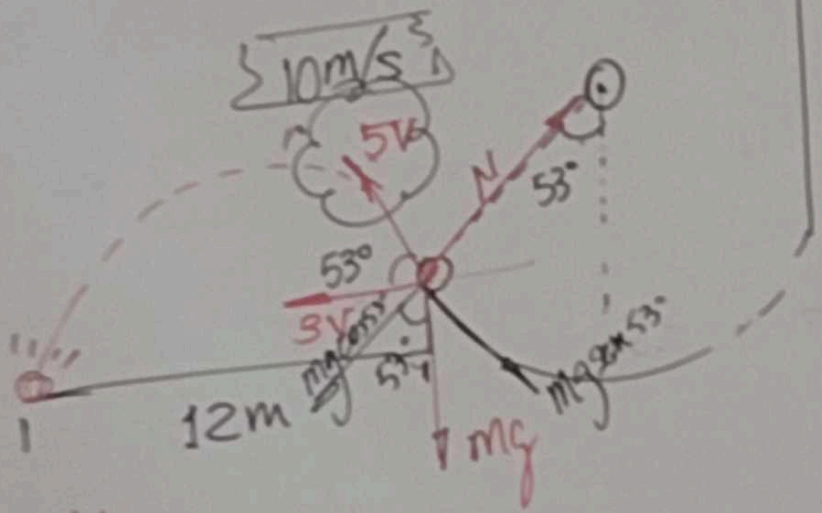
VERTICAL

$h = V_i t + \frac{1}{2}gt^2$

$(10) = 5t^2$

$t = \sqrt{2} s$

TRIBUTOS



$$F_c = M \cdot a_c$$

$$N - mg\cos 53° = \frac{mV^2}{R}$$

$$N = \frac{mV^2}{R} + mg\cos 53°$$

$$N = \frac{(1)(10)^2}{10} + (1)(10)\left(\frac{3}{5}\right)$$

$$N = 10 + 6$$

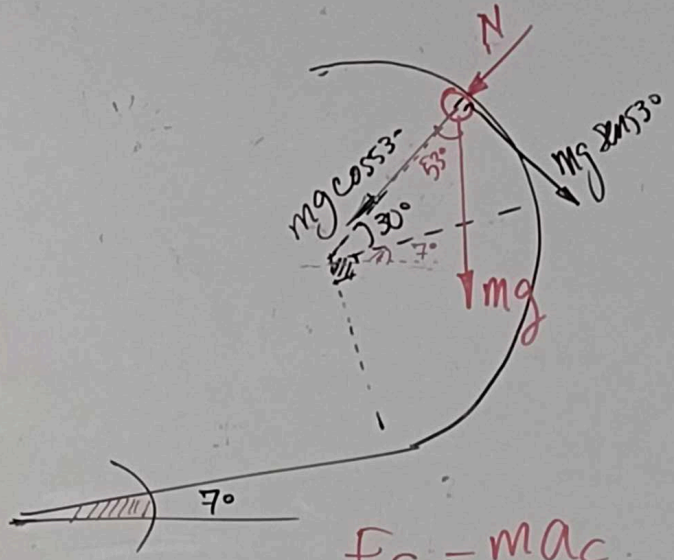
$$N = 16\,N$$

HORIZONTAL

$$d_H = V_H\, t$$

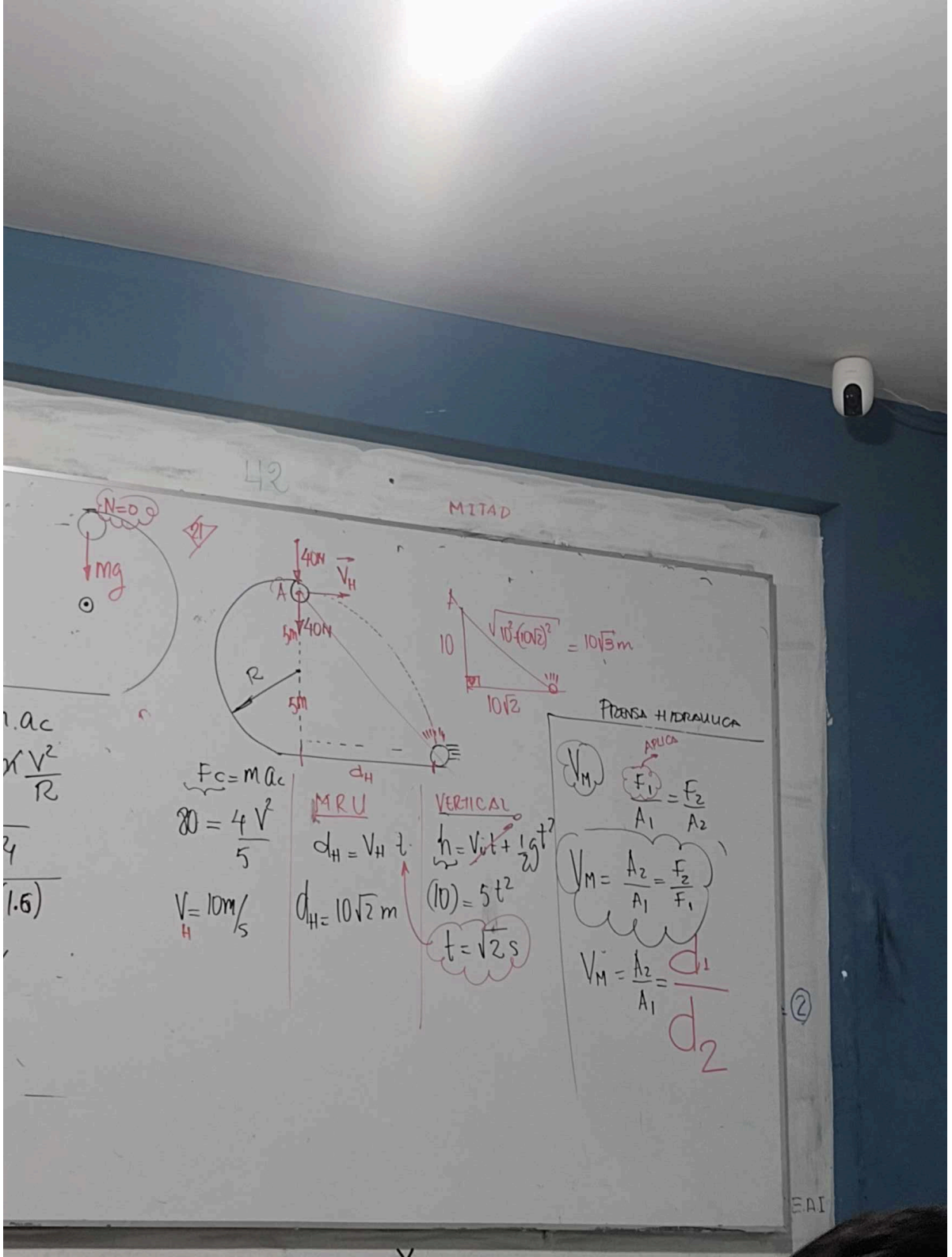
$$R = 3V \cdot (2)$$

$$V = 2\,m/s$$



$$\underbrace{F_c = ma_c}$$

$$N + mg\cos 53° = ma_c^2$$


42
MITAD
N=0
mg
40N
$\vec{V_H}$
A
40N
5m
R
5m
d_H
$\sqrt{10^2-(10\sqrt{2})^2} = 10\sqrt{3}\,m$
10
$10\sqrt{2}$
$F_c = m a_c$
$80 = \frac{4V^2}{5}$
$V_H = 10\,m/s$
MRU
$d_H = V_H\, t$
$d_H = 10\sqrt{2}\,m$
VERTICAL
$h = V_0 t + \frac{1}{2} g t^2$
$(10) = 5t^2$
$t = \sqrt{2}\,s$
PRENSA HIDRAULICA
APLICA
V_M
$\frac{F_1}{A_1} = \frac{F_2}{A_2}$
$V_M = \frac{A_2}{A_1} = \frac{F_2}{F_1}$
$V_M = \frac{A_2}{A_1} = \frac{d_1}{d_2}$
.ac
$\frac{V^2}{R}$
(1.6)