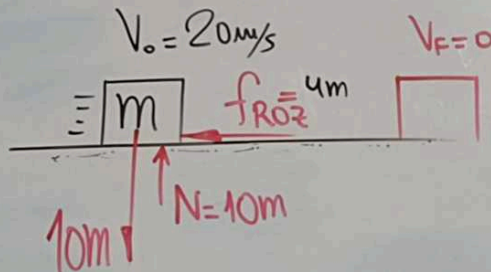
$\mu = \begin{cases} 0,4 = \mu_c \\ 0,5 = \mu_e \end{cases}$

(22)



1) $f_{ROZ} = \mu_c N = 0,4(10m) = 4m$

2) $F_{Re} = ma$

$-4m = ma$

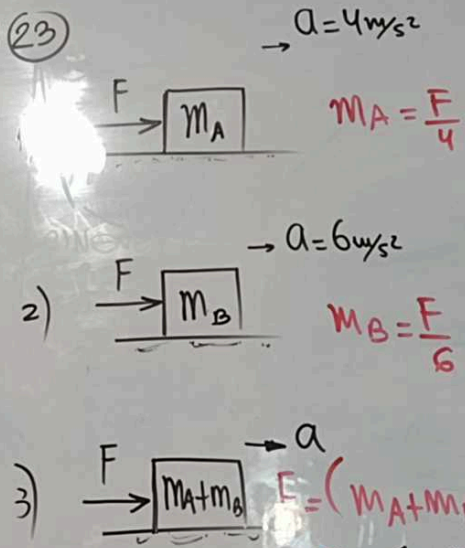
$a = -4 m/s^2$

3) $V_F^2 = V_0^2 - 2ad$

$0 = 400 - 2(4)d$

$d = 50m$

(23)

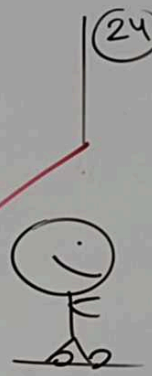


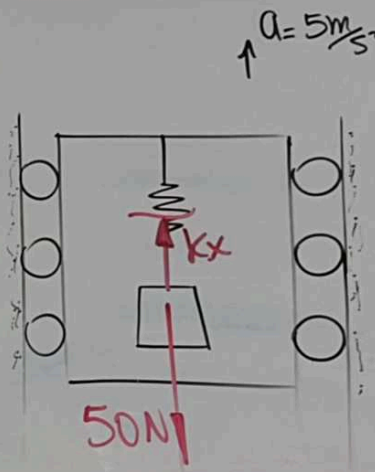
$F = (m_A + m_B)a$

$F = \left(\frac{10F}{24}\right) \cdot a$

$a = 2,4 m/s^2$

(24)





$F_{Re} = ma$

$Kx - 50 = 5(5)$

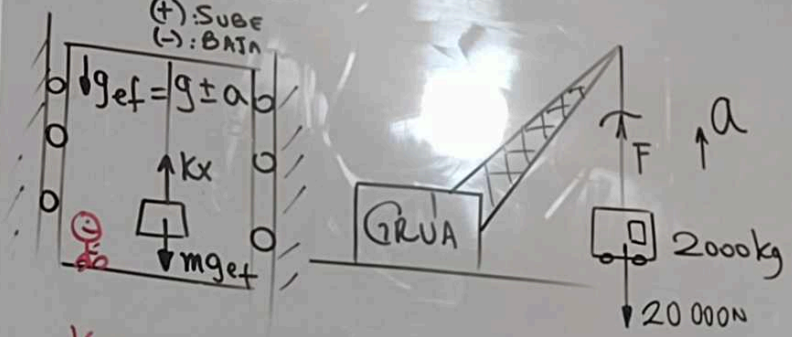
$150x = 75$

$x = 0,5m$

↑ $a = 5 m/s^2$

(25)

(+): SUBE
(-): BAJA



$Kx = mg_{ef}$

$Kx = m(g+a)$

$150X = 5(10+5)$

$X = 0{,}5m$ ✓

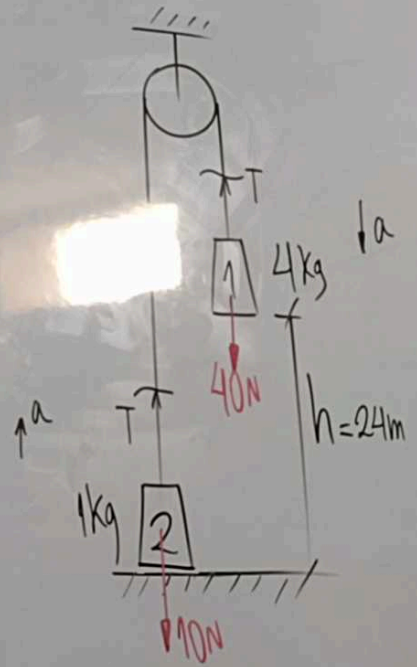
/ $a = \frac{\Delta V}{\Delta t} = \frac{-5 m/s}{1 s} = -5 m/s^2$

/ $F_{Re} = ma$

$F - 20\,000 = 2000(-5)$

$F = 10\,000N$ ✓

(26)



$F_{Re} = ma$

$+ \begin{cases} 40 - T = 4a \\ T - 10 = 1a \end{cases}$

$30 = 5a$

$a = 6 m/s^2$

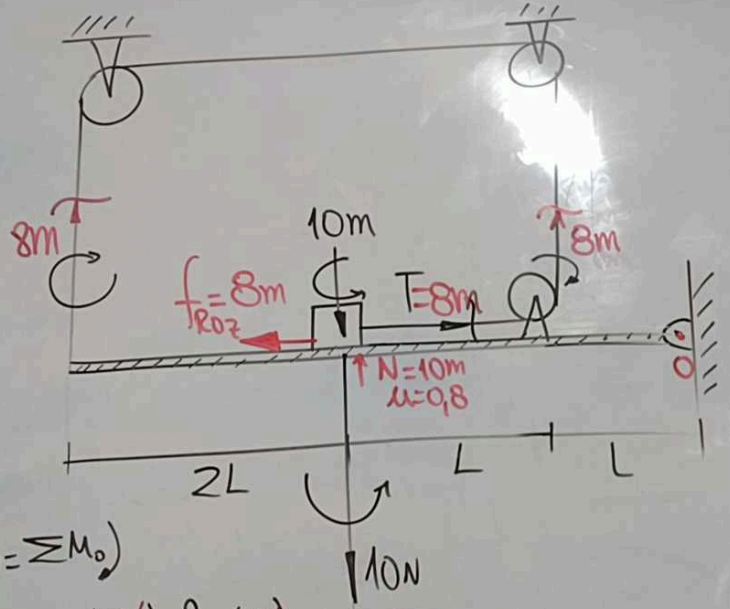
$V_F^2 = V_0^2 + 2a \cdot d$

$V_F^2 = 0 + 2(6)(12)$

$V_F = 12 m/s$ ↓

$CS: \langle -8, -7] \cup [8, \ldots$

(20)



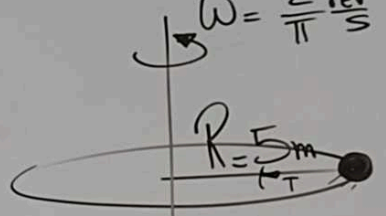
$\Sigma M_{O)} = \Sigma M_{O)}$

$10(2L) + 10m(2L) = 8m(4L) + 8m(L)$

$20 + 20m = 40m$

$m = 1kg \rightarrow W_{BLOQUE} = 10N$ ✓

(27)



$\omega = \frac{2}{\pi}\frac{rev}{s} = \frac{2}{\pi}\left(2\pi\frac{rad}{s}\right)$

$\omega = 4\,rad/s$

$F_{cp} = ma_{cp}$

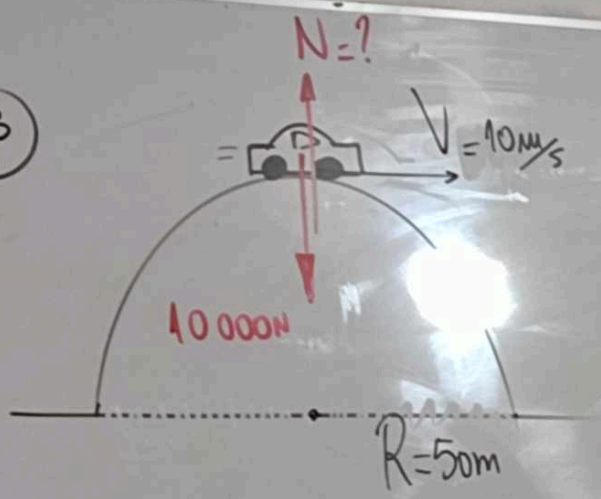
$T = 0,2(\omega^2 R)$

$T = 0,2(4)^2 \cdot 5$

$T = 16N$ ✓

(28)

(28)



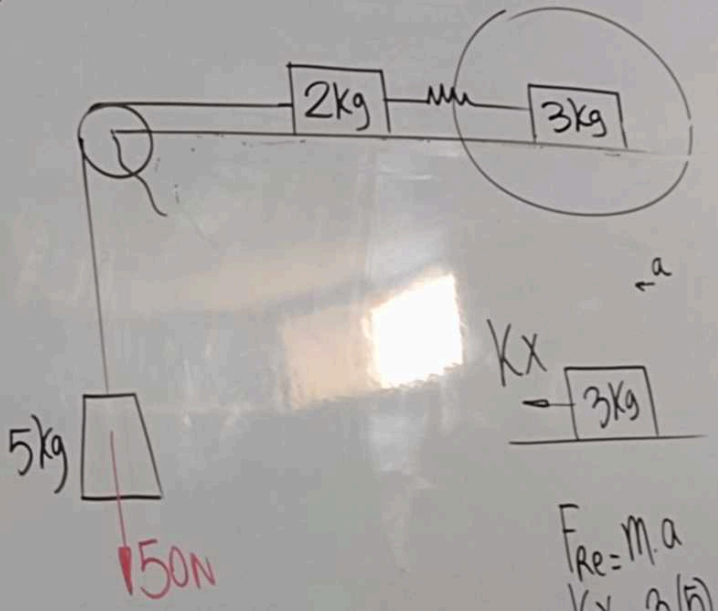
$F_{cp} = m a_{cp}$

$10\,000 - N = 1000\left(\frac{V^2}{R}\right)$

$10000 - N = 1000\left(\frac{100}{50}\right)$

$N = 8000N = 8kN$ ✱

(29)



1) $F_{Re} = m_{total} \cdot a$

$50 = 10 \cdot a$

$a = 5 m/s^2$ ✱

$F_{Re} = m \cdot a$

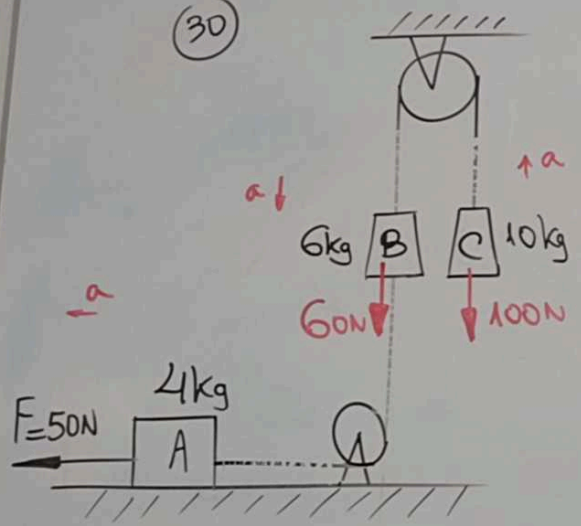
$Kx = 3(5)$

$5x = 3(5)$

$x = 3cm$ ✱

$CS = \langle -8, -7] \cup [8, 7$

(30)

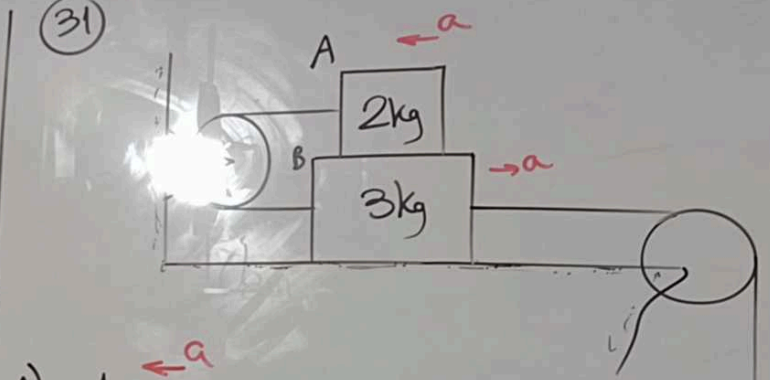


$F_{Re} = m_{TOTAL} \cdot a$

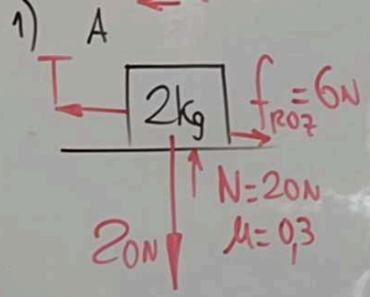
$50 + 60 - 100 = (20) \cdot a$

$a = 0{,}5\ m/s^2$

(31)



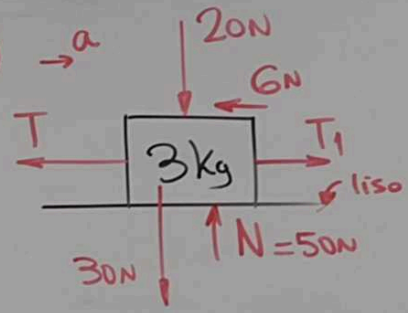
1)



$F_{Re} = ma$

$T - 6 = 2a - ①$

2)



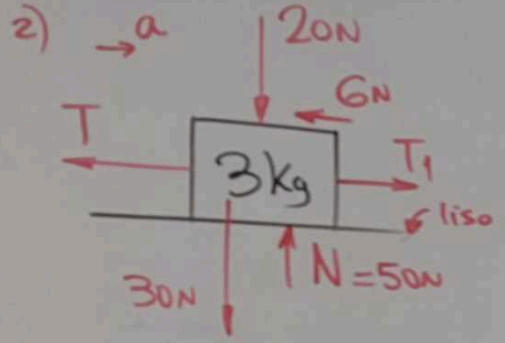
$F_{Re} = ma$

$T_1 - T - 6 = 3a$

$T_1 = T + 6 + 3a$

$T_1 = (2a + 6) + 6 + 3a$

$\boxed{T_1 = 5a + 12}$

2) 

10kg
a

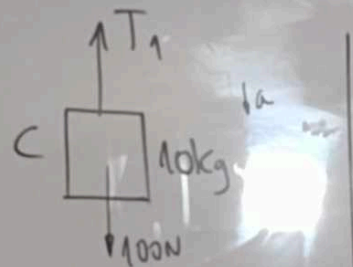
$F_{Re} = ma$

$T_1 - T - 6 = 3a$

$T_1 = T + 6 + 3a$

$T_1 = (2a + 6) + 6 + 3a$

$\boxed{T_1 = 5a + 12}$

3) 

(32)

$F_{Re} = ma$

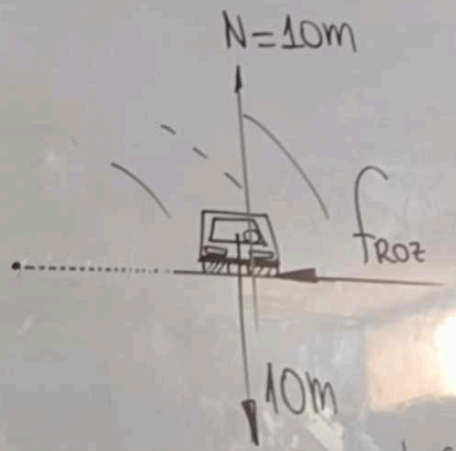
$100 - T_1 = 10a$

$100 = T_1 + 10a$

$100 = (5a + 12) + 10a$

$88 = 15a$

$a = 5{,}86\,m/s^2$ ↓



$F_{cp} = ma_{cp}$

$f_{ROZ} = ma_{cp}$

$\mu N = ma_{cp}$

$0{,}5(10m) = ma$

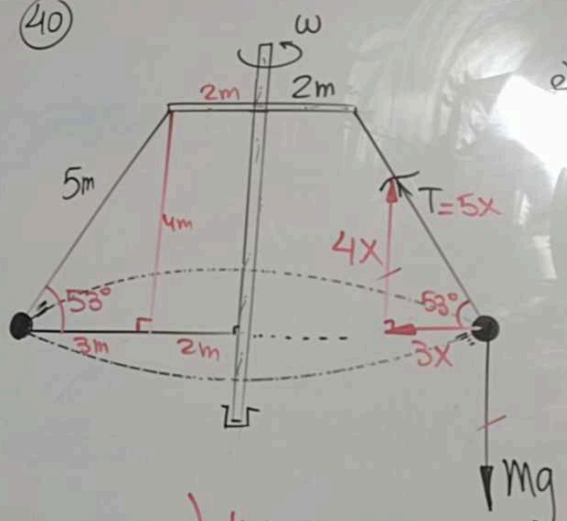
$a_{cp} = 5\,m/s^2$

$a_{cp} = \frac{V^2}{R}$

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

$V = 20\,m/s$ →

(40)



1) $4X = mg$

$X = \frac{mg}{4}$

e) $F_{cp} = ma_{cp}$

$3X = ma_{cp}$

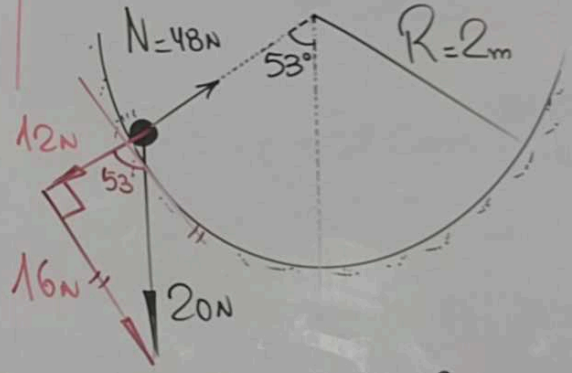
$3\left(\frac{mg}{4}\right) = ma_{cp}$

$a_{cp} = \frac{3g}{4}$

$a_{cp} = \frac{3}{4}(9,8)$

$a_{cp} = 7,35 m/s^2$

(38)



$F_{cp} = ma_{cp}$

$36 = 2\left(\frac{V^2}{R}\right)$

$18 = \frac{V^2}{2}$

$V = 6 m/s$