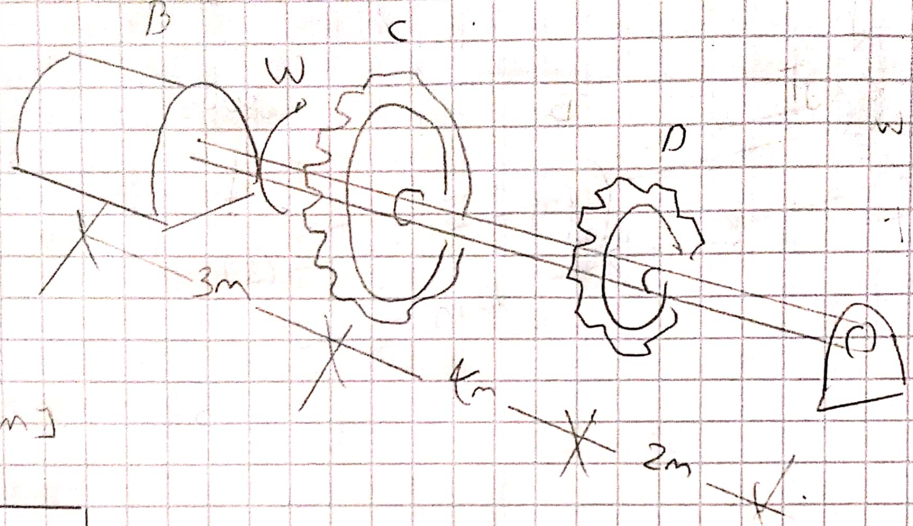
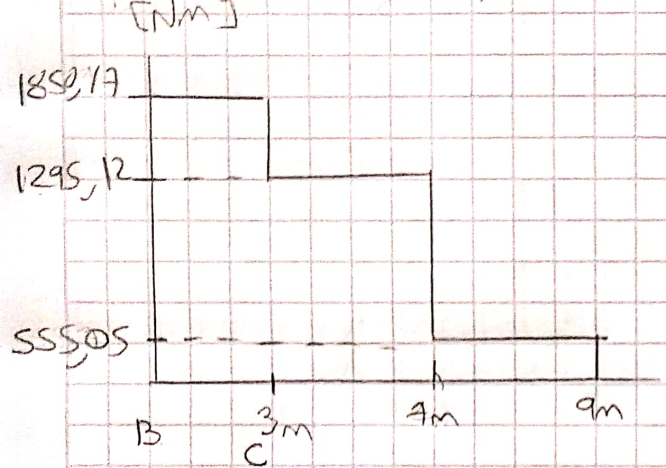
④





$P = T\omega$

$$T = \frac{P}{\omega} = \frac{155\times10^{3}\ W}{800\,rpm\ \frac{2\pi\,rad}{1\,rpm}\cdot\frac{1\,min}{60\,seg}}$$

$T = 1850,17$

$T_C = 1850,17\,(0,7) = 1295,12\ N$

$T_D = 1850,17\,(0,3) = 555,05\ N.$

$$J = \frac{\pi D^4}{32} = \frac{\pi\,(100mm)^4}{32} = 9,81\times10^{-6}\ m$$

$G = 77\,Gpa$

BC ⇒ $\tau_{máx}$

50mm { } 100mm

C

$$\tau_{máx} = \frac{Tc}{J} = \frac{1850,17\,(0,05\,m)}{\frac{\pi}{2}\,(0,05)^4} = 9,42\ Mpa$$

$G = A\text{-}36 = 75\ GPa$

$$\phi_{E/B} = \frac{TL}{JG} = \frac{1850,17(3) + 555,05(4)}{\frac{\pi}{2}\,(0,05)^4\,(75\times10^9)} = 0,01055\ rad$$

$$grados = 0,01055\ rad\ \frac{180}{\pi} =$$

$grados = 0,604°$