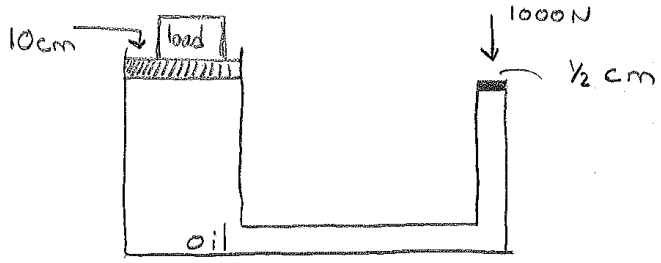
4.

If the man exert a force of 1000 N at A, what load will he be able to lift? = Show your work =



II

An inclined manometer with an indicating leg at 30° ±1° is used to measure air pressure. The specific weight of the oil is $\gamma = 9770 \pm 0.5\%$ N/m^3 at 95%, the manometer resolution is 1mm. Let $\Delta P = P_u - P_{atm} = 10$ Pa

Find the uncertainty in $\Delta P = P_u - P_{atm}$.

Solution:

III. Find the pressures at A, B, C and D in terms of any parameters you deem proper. Make sure your label these on the figure.