

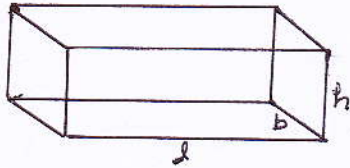
DR VIRENDRA SWARUP EDUCATION CENTRE
PHYSICS NUMERICAL SHEET.

(PHYSICS)

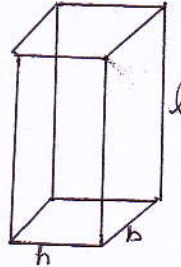
Numerical Sheet-1

(VIII)

- 1) A cylinder of mass 10kg. and a cone of mass 5kg. are kept on the surface of a table. Both having same base radius ($r=7\text{cm}$). compare the pressure exerted by them on the table. ($\pi = 22/7$) ($g = 10\text{m/s}^2$)
- 2) A cuboid of dimensions $30\text{cm} \times 20\text{cm} \times 10\text{cm}$ are kept on the surface, as given below. If mass of cuboid is 60gm. Calculate the pressure exerted by cuboid in i) case A ii) case B ($g = 10\text{ N/Kg}$)

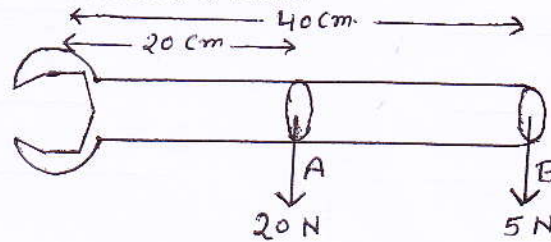


(A)



(B)

- 3) Given a picture of a wrench and force is applied at two different places A & B. Calculate the torque produced in both of cases.



- 4) An iron ball of mass 3Kg is stationary on a floor. The area of the point of contact between the ball and the floor is 250 cm^2 . Find the pressure exerted by the ball on the floor?
- 5) Calculate the atmospheric pressure at a place, where the reading of barometer is given as shown in the diagram below- ($d_{\text{Hg}} = 13.6\text{ g cm}^{-3}$, $g = 10\text{ms}^{-2}$)