

H.W
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Home Assignment Force and Pressure

1. Find the moment of force of 20 N about an axis of rotation at a distance 40 cm from the force.

Ans-

$$\text{Force} = 20 \text{ N}$$

$$\text{Distance} = 40 \text{ cm}$$

$$\begin{aligned} \text{Moment of force} &= F \times S \\ &= 20 \times 40 \\ &= 800 \text{ Nm} \end{aligned}$$

2. The moment of force of 20 N about point is 2 Nm. Find the perpendicular distance of force from that point.

Ans

$$F = 20 \text{ N}$$

$$\text{Moment of force} = 2 \text{ Nm}$$

$$\text{Distance} = \frac{\text{Moment of force}}{\text{Force}} = \frac{2 \text{ Nm}}{20 \text{ N}}$$

$$= \frac{1}{10} \text{ m} = 0.1 \text{ m}$$

3. Define force. Write the SI unit of force.

Ans A force is a push or pull upon an object resulting from the objects' interaction with another object is known as force.

The SI unit of force is Newton (N)

4. Define the term moment of force.

Ans When a push or pull is applied on object that ~~is~~ it is known as moment of force.