

**QUESTION:**

What is the pressure that an object exerts on the floor that has a weight of 500N and area of .001m squared?

**SOLUTION:**

Pressure is the ratio of force F to the area S over which that force is distributed.

$$p = \frac{F}{S}$$

Here F = 500 N and S = 0.001 m<sup>2</sup>. Hence

$$p = \frac{500}{0.001} = 0.5 \text{ MPa}$$

**ANSWER:**

$$p = \frac{500}{0.001} = 0.5 \text{ MPa}$$