**Answer on Question #49183 – Physics - Mechanics | Kinematics | Dynamics**

Suppose that you balance a 5 kg ball on the tip of your finger that has an area of 1 cm2. What is the pressure
on your finger?

**Solution**:
$m = 5kg - mass\ of\ the\ ball;$
$A = 1\ cm^2 = 10^{-4}m^2 - area\ of\ the\ tip\ of\ the\ finger;$
$p - pressure\ on\ the\ finger;$

Pressure is defined as force per unit area.

$$p = \frac{Force}{Area} = \frac{F}{A} = \frac{mg}{A} = \frac{5kg \cdot 9.8\frac{N}{kg}}{10^{-4}m^2} = 490\ \text{kPa}$$

**Answer**: pressure is equal to $490$ kPa.