

## Answer on Question #54849, Physics

A manometer of cross-section 0.012 and contains liquid weighing  $8000 \text{ N/m}^3$ . Gas supply causes the liquid difference to be 0.25 m. Calculate the weight of the liquid

### Solution

The weight of the liquid is given by Eq.(1).

$$P = S \cdot h \cdot D = 0.012m^2 \cdot 0.25m \cdot 8000N/m^3 = 24N \quad (1)$$

where  $S$  is the cross-sectional area;  $h$  is the height of liquid column;  $D$  is the specific weight.

**Answer:** 24N.