

## Answer on Question #64300, Physics / Molecular Physics | Thermodynamics

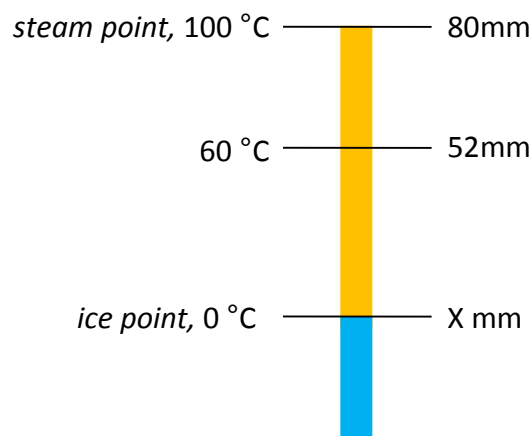
### Question:

The ice and steam points on a thermometer correspond to  $X$  and  $80\text{mm}$  respectively. A temperature of  $60^\circ\text{C}$  corresponds to  $52\text{mm}$  on the thermometer. Calculate the value of  $X$ .

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### Solution:

Let's illustrate our initial data:



Assuming that the scale of our thermometer is uniform, we may write this proportion:

$$\frac{52 - X}{60 - 0} = \frac{80 - X}{100 - 0}$$

$$\begin{aligned}\text{Then } 100 \cdot (52 - X) &= 60 \cdot (80 - X), \\ 5200 - 100X &= 4800 - 60X \\ -40X &= -400 \\ X &= 10\text{mm}\end{aligned}$$

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### Answer:

$$X = 10\text{mm}$$

Answer provided by <https://www.AssignmentExpert.com>