

Quiz

Name:

ID

A student tried to find the thermal expansion coefficient of Brass (α). He obtained the following data

scale (cm)	Expansion (mm)
25	0
26	0.1
27	0.2
28	0.3
29	0.4
30	0.5

Temperature ($^{\circ}\text{C}$)	Scale (cm)
20	25
40	26
60	27
80	28
100	29
120	30

If the initial length of the Brass rod is $L_0 = 50 \text{ cm}$, answer the following questions:

Note $L = L_0(1 + \alpha(T - T_0))$

1. What is the expansion at $T = 30 \text{ }^{\circ}\text{C}$
2. What is the length of the rod at $T = 30 \text{ }^{\circ}\text{C}$
3. What is (α)