

9) Temperature of a penny is raised by 100.0°C & its diameter increases by 0.18% . What is the percent increase in volume?

$$\frac{\Delta L}{L} = 0.18\% = \alpha \Delta T \quad \frac{\Delta V}{V} = 3\alpha \Delta T = 3 \times 0.18\% \\ = 0.54\% \text{ (E)}$$