Physics Formula Sheet

Chapter by chapter, topic by topic. Written by the PadhoNa team for quick revision.

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CHAPTER 33

Experimental Physics

Measuring instruments

VERNIER CALLIPERS

$$\text{LC} = 1\ \text{MSD} - 1\ \text{VSD}; \qquad \text{reading} = \text{MSR} + n \times \text{LC} - \text{zero error}$$

SCREW GAUGE

$$\text{LC} = \frac{\text{pitch}}{\text{circular scale divisions}}; \qquad \text{reading} = \text{MSR} + n \times \text{LC} - \text{zero error}$$

Experiments and error analysis

PENDULUM G

$$g = \frac{4\pi^2 l}{T^2}, \qquad \frac{\Delta g}{g} = \frac{\Delta l}{l} + 2\frac{\Delta T}{T}$$

YOUNG'S MODULUS (SEARLE)

$$Y = \frac{4MgL}{\pi d^2\, \Delta l}$$

SPECIFIC RESISTANCE

$$\rho = \frac{\pi d^2 R}{4L}$$

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