

FISICA

11/SEP/2023

Al medir 6 veces la longitud de un palo de escoba se obtuvieron las siguientes medidas 1.56m, 1.58m, 1.55m, 1.59m, 1.57m, 1.6m

$$a) m = \frac{1.56 + 1.58 + 1.55 + 1.59 + 1.57 + 1.6}{6} = \frac{9.45}{6} = 1.575$$

$$b) |1.56 - 1.58| = |-0.02| = 0.02$$

$$|1.58 - 1.58| = |0| = 0$$

$$|1.55 - 1.58| = |-0.03| = 0.03$$

$$|1.59 - 1.58| = |0.01| = 0.01$$

$$|1.57 - 1.58| = |-0.01| = 0.01$$

$$|1.60 - 1.58| = |0.02| = 0.02$$

$$\Delta m = \frac{0.02 + 0 + 0.03 + 0.01 + 0.01 + 0.02}{6} = \frac{0.09}{6} = 0.015$$

$$M = m + \Delta m$$

$$M = 1.58 \pm 0.02 \text{ m}$$

$$1.58 - 0.02 = 1.56 \text{ y } 1.58 + 0.02 = 1.60 \text{ m es entre } 1.56 \text{ y } 1.60$$

$$d) E_r = \frac{\Delta m}{m} = \frac{0.02}{1.58} = 0.0126 \quad E_r = 0.0126$$

$$e) E_p = E_r \times 100$$

$$E_p = 0.0126 \times 100 = 1.26 \quad E_p = 1.26\%$$