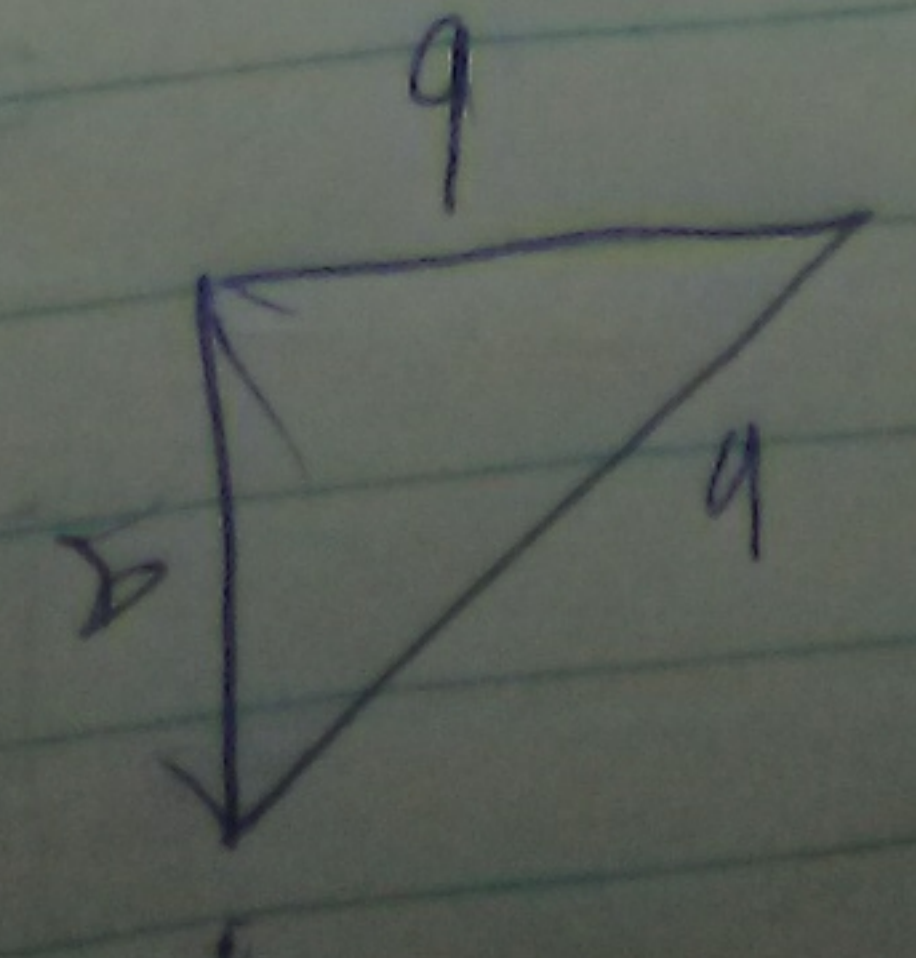
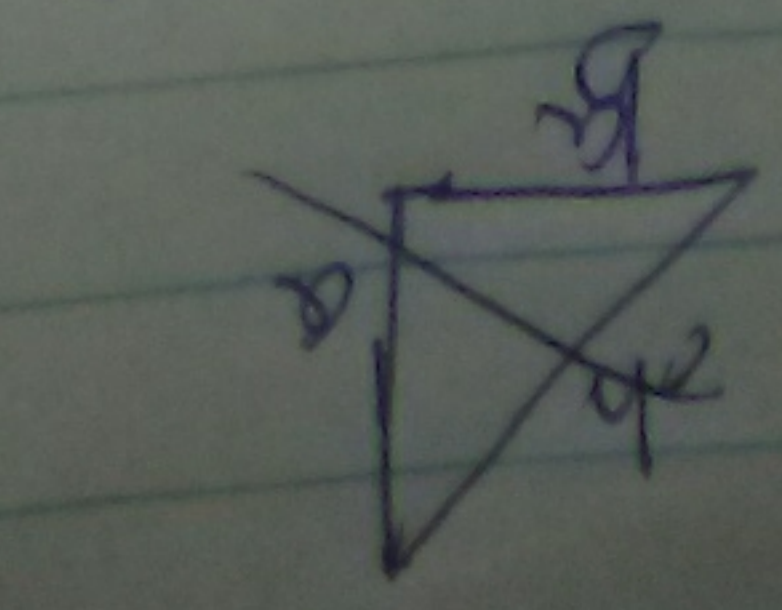


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$$\sigma_a - \sigma_a \cdot \frac{a}{\sqrt{a^2 + b^2}} + \tau_a \cdot \frac{b}{\sqrt{a^2 + b^2}} = \sigma_b$$

$$= \frac{b}{\sqrt{a^2 + b^2}} \cdot \sigma_a + \frac{a}{\sqrt{a^2 + b^2}} \cdot \tau_a$$

$$\sigma_b = 1.5\% = \frac{1.5}{100} = \frac{3}{200}$$

$$\sigma_b = \frac{b}{\sqrt{a^2 + b^2}} \left(\frac{3a}{200} \right) + \frac{a}{\sqrt{a^2 + b^2}} \left(\frac{3b}{200} \right)$$

$$\sigma_b = \frac{3}{200} \left(\frac{b}{\sqrt{a^2 + b^2}} a + \frac{a}{\sqrt{a^2 + b^2}} b \right)$$

$$\sigma_b = \frac{3}{200} \left[\frac{2ab}{\sqrt{a^2 + b^2}} \right]$$

(9)

$$h = \frac{a}{\sqrt{a^2 + b^2}} = \frac{a}{\sqrt{a^2 + b^2}} \cdot \frac{1}{2}$$

$$v = \frac{b}{\sqrt{a^2 + b^2}}$$

$$\tau = \tau_a = \frac{3b}{200}$$

$$\frac{d\tau}{da} = \frac{3}{200} \cdot \frac{1}{a^2} = \frac{3}{200a^2}$$

$$\delta \tau = \frac{3}{200} \cdot \frac{1}{a^2} \cdot \delta a = \frac{3}{200} \cdot \frac{1}{(1.5)^2} \cdot \delta a$$

$$\sigma_c = \frac{3}{200} \cdot \frac{1}{(1.5)^2} \cdot \delta a = \frac{3}{200} \cdot \frac{1}{2.25} \cdot \delta a = \frac{3}{450} \delta a = \frac{1}{150} \delta a$$

$$\delta h = \frac{a}{\sqrt{a^2 + b^2}} = \frac{1}{\sqrt{1 + \left(\frac{b}{a}\right)^2}}$$

$$\delta h = \frac{1}{\sqrt{1 + \left(\frac{b}{a}\right)^2}} = \frac{1}{\sqrt{1 + \left(\frac{1}{2}\right)^2}} = \frac{1}{\sqrt{1.25}} = \frac{2}{\sqrt{5}}$$

$$\frac{d(\delta h)}{da} = \frac{1}{\sqrt{a^2 + b^2}}$$

$$\delta h = \frac{1}{\sqrt{a^2 + b^2}} \cdot \delta a = \frac{1}{\sqrt{1 + \left(\frac{b}{a}\right)^2}} \cdot \delta a$$

$$\delta h = \frac{1}{\sqrt{a^2 + b^2}} \cdot \left(\frac{3a}{200} \right) + \frac{1}{\sqrt{a^2 + b^2}} \cdot \left(\frac{3b}{200} \right)$$

$$= \frac{3}{200} \frac{a^2 + b^2}{\sqrt{a^2 + b^2}} = \frac{3}{200} \sqrt{a^2 + b^2}$$

$$= \frac{3}{200} \sqrt{1 + \left(\frac{b}{a}\right)^2} = \frac{3}{200} \sqrt{1 + \left(\frac{1}{2}\right)^2} = \frac{3}{200} \sqrt{1.25} = \frac{3}{200} \cdot \frac{\sqrt{5}}{2} = \frac{3\sqrt{5}}{400}$$

$$= 0.015\%$$