

$$dc = \frac{dc}{da} \cdot da + \frac{dc}{db} \cdot db$$

$$\partial c = a_1 (ca^2 + b^2)^{-1/2} \cdot 1.5/100a + b(ca^2 + b^2)^{-1/2} \cdot 1.5/100$$

$$\partial c = ca^2 \cdot 1.5/100 (ca^2 + b^2)^{-1/2} + b^2 (ca^2 + b^2)^{-1/2} \cdot 1.5/100$$

$$\partial c = (ca^2 + b^2)^{-1/2} (ca^2 \cdot 1.5/100 + b^2 \cdot 1.5/100)$$

$$\partial c = (ca^2 + b^2)^{-1/2} \times 1.5/100 \times (ca^2 + b^2)$$

$$\partial c = \frac{1.5}{100} \times (ca^2 + b^2)^{-1/2} \times (ca^2 + b^2)^{-1/2}$$

$$\partial c = \frac{1.5}{100} \times (ca^2 + b^2)^{-1/2}$$

$$\partial c = \frac{1.5}{100} \times (ca^2 + b^2)^{-1/2}$$

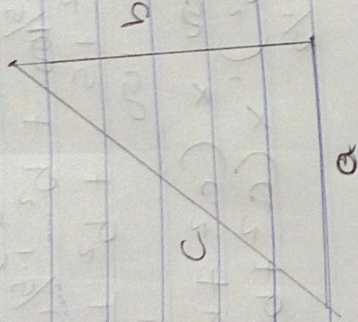
$$\partial c = \pm 1.5\% c$$

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$$c^2 = a^2 + b^2$$
$$c = (a^2 + b^2)^{1/2}$$

a) $A = \frac{1}{2}bh = \frac{1}{2}ab$

$$\frac{dA}{da} = \frac{1}{2}b$$

$$\frac{dA}{db} = \frac{1}{2}a$$

$$dA = \frac{dA}{da} da + \frac{dA}{db} db$$

$$dA = \frac{1}{2}b \cdot \frac{1.5}{100} a + \frac{1}{2}a \cdot \frac{1.5}{100} b$$

$$dA = \frac{1}{2}ab \left(\frac{1.5}{100} + \frac{1.5}{100} \right)$$
$$= \frac{1}{2}ab \left(\frac{3}{100} \right)$$

$$dA = \frac{1}{2} \cdot 3\% \cdot A$$

b) $c^2 = a^2 + b^2$

$$c = \sqrt{a^2 + b^2}$$

$$c = (a^2 + b^2)^{1/2}$$

$$\frac{dc}{da} = \frac{1}{2} (a^2 + b^2)^{-1/2} \cdot 2a$$

$$\frac{dc}{da} = \frac{1}{2} a (a^2 + b^2)^{-1/2}$$

$$\frac{dc}{db} = \frac{1}{2} b (a^2 + b^2)^{-1/2} \cdot 2b$$

$$\frac{dc}{db} = \frac{1}{2} b (a^2 + b^2)^{-1/2}$$