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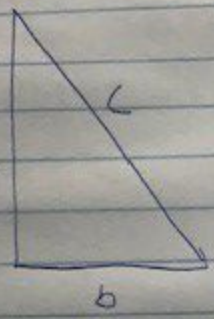
1.




Area of a triangle(A) = $\frac{1}{2} b \times h$

$\Rightarrow \frac{1}{2} a \times b$

$$\frac{\partial A}{\partial a} = \frac{b}{2}$$

$$\frac{\partial A}{\partial b} = \frac{a}{2}$$

$$\partial = \frac{\partial A}{\partial a} \partial a + \frac{\partial A}{\partial b} \partial b$$

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

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

$\frac{ab}{2} \pm 3\%$

2. $C^2 = a^2 + b^2$

$C = \sqrt{a^2+b^2} = (a^2+b^2)^{\frac{1}{2}}$

Let $a^2+b^2 = u$

$C = u^{\frac{1}{2}}$

$\frac{\partial C}{\partial u} = \frac{1}{2} u^{-\frac{1}{2}} = \frac{1}{2\sqrt{u}} = \frac{1}{2\sqrt{a^2+b^2}}$

$\frac{\partial C}{\partial u} \times \frac{\partial u}{\partial a} = \frac{\partial C}{\partial a}$

$\frac{\partial C}{\partial a} = 2C, \quad \frac{\partial u}{\partial b} = 2b$

$\frac{\partial C}{\partial u} \times \frac{\partial u}{\partial a} = \frac{\partial C}{\partial a} = \frac{1}{2\sqrt{a^2+b^2}} \times 2a$

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

$\frac{\partial C}{\partial u} \times \frac{\partial u}{\partial b} = \frac{\partial C}{\partial b} = \frac{1}{2\sqrt{a^2+b^2}} \times 2b$

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

$2a = \pm 1.5\%$

$$\Delta b = \pm 0.5\% \, b$$

$$= \pm 0.015 b$$

$$\Delta c = \frac{\partial c}{\partial a} \Delta a + \frac{\partial c}{\partial b} \Delta b$$

$$= \pm \frac{a}{\sqrt{a^2+b^2}} \times 0.015 c + \frac{b}{\sqrt{a^2+b^2}} \times 0.015 b$$

$$= a^2 + \frac{0.015}{\sqrt{a^2+b^2}} + \frac{b^2}{\sqrt{a^2+b^2}} \times 0.015$$

$$= \pm (a^2 + b^2) \left( \frac{0.015}{\sqrt{a^2+b^2}} \right.$$

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

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

$$\therefore \pm c^2 \cdot 0.015$$

$$= \pm c \cdot 0.0c15$$

$$= 1.5\% \text{ of } c$$