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

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

$$da = \pm \frac{3a}{100} \cdot db = \frac{\pm 3b}{200}$$

$$dc = \frac{\partial c}{\partial a} \cdot da + \frac{\partial c}{\partial b} \cdot db$$

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

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

$$= \frac{3}{200} \left(\frac{c^2}{c} \right)$$

$$= \frac{3}{200}(c)$$

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