

$$2.3 \quad a = \frac{v^2}{r} \quad \text{--- (1)}$$

$$v \text{ is } \pm 0,2\% \quad \Delta v = \pm \frac{0,2}{100} v; \quad \frac{-0,2}{100} v$$

$$r \text{ is } \pm 0,8\% \quad \Delta r = \pm \frac{0,8}{100} r; \quad \frac{-0,8}{100} r$$

$$\Delta a = \frac{\partial a}{\partial v} \times \Delta v + \frac{\partial a}{\partial r} \times \Delta r \quad \text{--- (2)}$$

$$\text{From (1)} \quad \frac{\partial a}{\partial v} = \frac{(0,2)^2}{r} \quad \frac{\partial a}{\partial r} = \frac{v^2}{0,8}$$

Subst in (2):

$$\Delta a = \left(\frac{(0,2)^2}{r} \right) \left(\frac{0,2}{100} v \right) + \left(\frac{v^2}{0,8} \right) \left(\frac{0,8}{100} r \right) \quad \text{--- (3)}$$

$$= \frac{0,008}{100 r} v + \frac{0,8 v^2}{80} r$$