

3 incertitudes:

$$a = (1,1 \pm 0,1) \text{ cm}$$

$$b = (0,8 \pm 0,1) \text{ cm}$$

$$c = (5,5 \pm 0,1) \text{ cm}$$

$$d = (60,2^\circ \pm 0,1)^\circ$$

$$V = a \times b \times c \times \sin(d)$$

$$V = 1,1 \times 0,8 \times 5,5 \times 60,2 = 4,2$$

$$V = f(a; b; c; d)$$

$$\bullet \frac{\partial f}{\partial a} = 0,8 \times 5,5 \times 60,2 = 264,88$$

$$\bullet \frac{\partial f}{\partial b} = 1,1 \times 5,5 \times 60,2 = 364,21$$

$$\bullet \frac{\partial f}{\partial c} = 1,1 \times 0,8 \times 60,2 = 52,976$$

$$\bullet \frac{\partial f}{\partial d} = 1,1 \times 0,8 \times 5,5 = 4,84$$

$$\Delta V = \left| \frac{\partial f}{\partial a} \right| \times \Delta a + \left| \frac{\partial f}{\partial b} \right| \times \Delta b + \left| \frac{\partial f}{\partial c} \right| \times \Delta c + \left| \frac{\partial f}{\partial d} \right| \times \Delta d$$

$$\Delta V = |264,88| \times 0,1 + |364,21| \times 0,1 + |52,976| \times 0,1 + |4,84| \times 0,1$$

$$\Delta V = 26,488 + 36,421 + 5,2976 + 0,484$$

$$\Delta V = 68,6906$$

$$V = (4,2 \pm 68,6906) \text{ cm}^3$$