Linearization

Imagine we have measured the two sides of an A4 paper, obtaining

$$a = 29.73 \pm 0.03 \text{ cm}$$
$$b = 21.45 \pm 0.04 \text{ cm}.$$

Evaluate (expected values, standard uncertainty and correlation)

▲ perimeter, $p = 2a + 2b$;

▲ Area, $A = ab$;

▲ diagonal, $d = \sqrt{a^2 + b^2}$

assuming both $\rho(a, b) = 0$ and $\rho(a, b) = +0.8$.

▶ Write directly C and then use the matrix formalism.