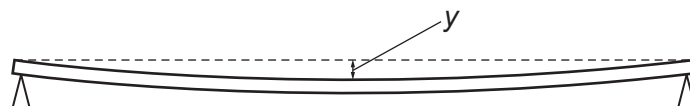


- 4 A metre rule is supported horizontally by two pivots as shown.



The vertical displacement y at the centre of the rule is given by the equation

$$y = \frac{kML^3}{wt^3}$$

where

k is a constant,

L is the distance between the pivots,

M is the mass of the rule,

t is the thickness of the rule and

w is the width of the rule.

In an experiment, the following results are obtained:

$$L = (80.0 \pm 0.2) \text{ cm}$$

$$M = (60 \pm 1) \text{ g}$$

$$t = (6.0 \pm 0.1) \text{ mm}$$

$$w = (23.0 \pm 0.5) \text{ mm}.$$

Which measurement contributes most to the uncertainty in the calculated value of y ?

A L

B M

C t

D w