

- 4 The resistance  $R$  of a resistor is determined by measuring the potential difference  $V$  across it and the current  $I$  in it. The value of  $R$  is then calculated using the equation

$$R = \frac{V}{I}.$$

The values measured are  $V = 1.00 \pm 0.05\text{ V}$  and  $I = 0.50 \pm 0.01\text{ A}$ .

What is the percentage uncertainty in the value of  $R$ ?

- A** 2.5%      **B** 3.0%      **C** 7.0%      **D** 10.0%