

1 What **must** be included in a record of a physical quantity?

- A an integer value for the quantity
- B an SI unit
- C a numerical value for the quantity
- D a unit expressed in base units

2 What is the ohm expressed in SI base units?

- A  $\text{kg m}^2 \text{s}^{-3} \text{A}^{-2}$     B  $\text{kg}^{-1} \text{m}^{-2} \text{s}^3 \text{A}^2$     C  $\text{J C}^{-1} \text{A}^{-1}$     D  $\text{W A}^{-2}$

3 A desk has a true width of 50.0 cm.

Two students, X and Y, measure the width of the desk.

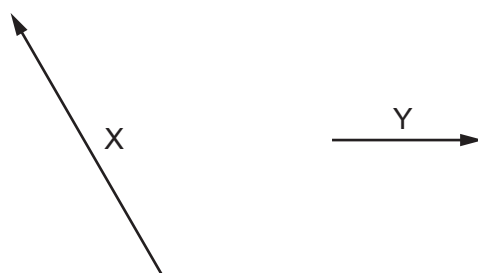
Student X uses a tape measure and records a width of  $(49.5 \pm 0.5) \text{ cm}$ .

Student Y uses a metre rule and records a width of  $(51.4 \pm 0.1) \text{ cm}$ .

Which statement about the measurement of student X is correct?

- A It is less accurate and less precise than the measurement of student Y.
- B It is less accurate but more precise than the measurement of student Y.
- C It is more accurate and more precise than the measurement of student Y.
- D It is more accurate but less precise than the measurement of student Y.

4 The diagram shows two vectors, X and Y, drawn to scale.



If  $X = Y - Z$ , which diagram represents the vector Z?

