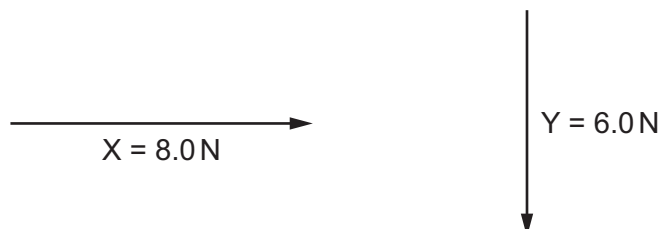


- 1 What is the best estimate of the kinetic energy of a family car travelling at 50 km h^{-1} ?
- A $1.5 \times 10^3 \text{ J}$ B $1.5 \times 10^5 \text{ J}$ C $1.5 \times 10^7 \text{ J}$ D $1.5 \times 10^9 \text{ J}$
- 2 The diagram shows two vectors X and Y. The vectors are perpendicular to one another.



What is the magnitude and direction of vector $(X - Y)$?

- A 10.0 N at an angle of 37° downwards from the direction of X
- B 10.0 N at an angle of 37° upwards from the direction of X
- C 14.0 N at an angle of 53° downwards from the direction of X
- D 14.0 N at an angle of 53° upwards from the direction of X
- 3 Which expression using SI base units is equivalent to the volt?
- A $\text{kg m}^2 \text{s}^{-1} \text{A}^{-1}$
- B $\text{kg m s}^{-2} \text{A}$
- C $\text{kg m}^2 \text{s}^{-1} \text{A}$
- D $\text{kg m}^2 \text{s}^{-3} \text{A}^{-1}$
- 4 A voltage is carefully measured with a high-quality instrument and found to be 2.321 V.
- Two students, using two different methods, conclude that the voltage is 2.33 V and 2.344 V respectively.
- Which statement is correct?
- A 2.33 V is less accurate and less precise than 2.344 V.
- B 2.33 V is less accurate and more precise than 2.344 V.
- C 2.33 V is more accurate and less precise than 2.344 V.
- D 2.33 V is more accurate and more precise than 2.344 V.