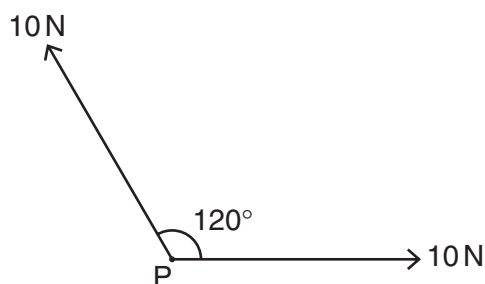


- 1 Which of the following is a scalar quantity?
- A acceleration
B mass
C momentum
D velocity
- 2 The unit of work, the joule, may be defined as the work done when the point of application of a force of 1 newton is moved a distance of 1 metre in the direction of the force.
- Express the joule in terms of the base units of mass, length and time, the kg, m and s.
- A $\text{kg m}^{-1} \text{s}^2$ B $\text{kg m}^2 \text{s}^{-2}$ C $\text{kg m}^2 \text{s}^{-1}$ D kg s^{-2}
- 3 Two forces, each of 10 N, act at a point P as shown in the diagram. The angle between the directions of the forces is 120° .



- What is the magnitude of the resultant force?
- A 5 N B 10 N C 17 N D 20 N
- 4 Which experimental technique reduces the systematic error of the quantity being investigated?
- A adjusting an ammeter to remove its zero error before measuring a current
B measuring several internodal distances on a standing wave to find the mean internodal distance
C measuring the diameter of a wire repeatedly and calculating the average
D timing a large number of oscillations to find a period
- 5 A student makes measurements from which she calculates the speed of sound as 327.66 m s^{-1} . She estimates that her result is accurate to $\pm 3\%$.

Which of the following gives her result expressed to the appropriate number of significant figures?

- A 327.7 m s^{-1} B 328 m s^{-1} C 330 m s^{-1} D 300 m s^{-1}