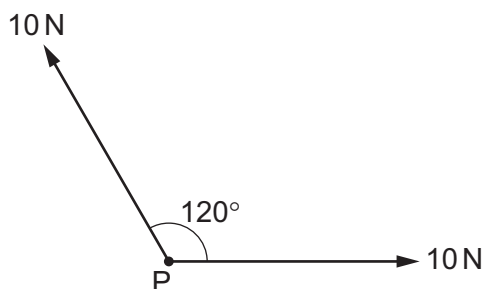


1 Which SI unit, expressed in base units, is **not** correct?

- A unit of force, kg m s^{-2}
- B unit of momentum, kg m s^{-1}
- C unit of pressure, $\text{kg m}^{-2} \text{s}^{-2}$
- D unit of work, $\text{kg m}^2 \text{s}^{-2}$

2 Two forces, each of 10 N, act at a point P as shown. 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

3 An ion is accelerated in a vacuum by a series of electrodes. A graph of the power supplied to the ion is plotted against time.

What is represented by the area under the graph between two times?

- A the average force on the ion
- B the change in kinetic energy of the ion
- C the change in momentum of the ion
- D the change in velocity of the ion

4 What is a typical value of the wavelength of a microwave travelling in a vacuum?

- A 3 000 000 pm
- B 30 nm
- C 30 000 μm
- D 3000 mm