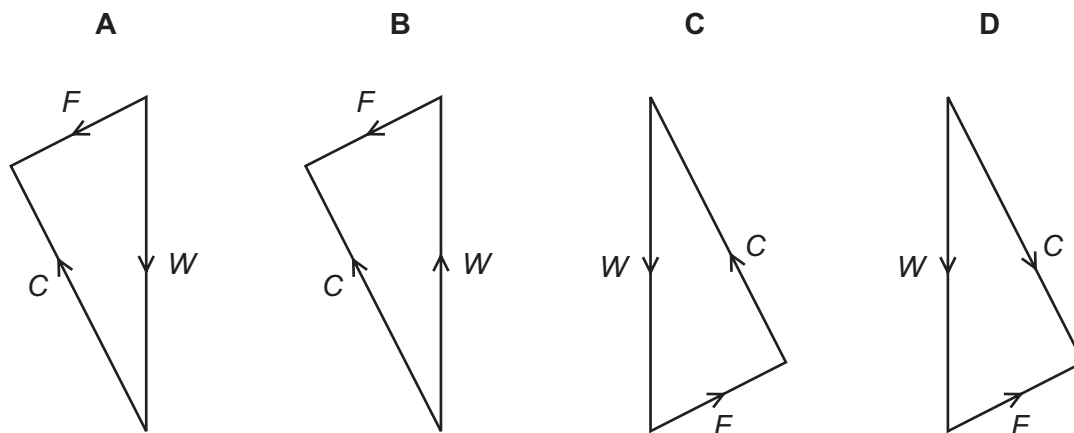


- 17** A sledge slides down a slope at a constant velocity. The three forces that act on the sledge are the normal contact force C , the weight W and a constant frictional force F .

Which diagram represents these forces acting on the sledge?



- 18** The kinetic energy of a particle is increased by a factor of 4.

By what factor does its speed increase?

- A** 2 **B** 4 **C** 8 **D** 16

- 19** A piston in a gas supply pump has an area of 600 cm^2 and it moves a distance of 40 cm during one stroke. The pump moves the gas against a fixed pressure of 5000 Pa.

How much work is done by the piston during one stroke?

- A** $1.2 \times 10^2 \text{ J}$ **B** $1.2 \times 10^4 \text{ J}$ **C** $1.2 \times 10^6 \text{ J}$ **D** $1.2 \times 10^8 \text{ J}$

Space for working