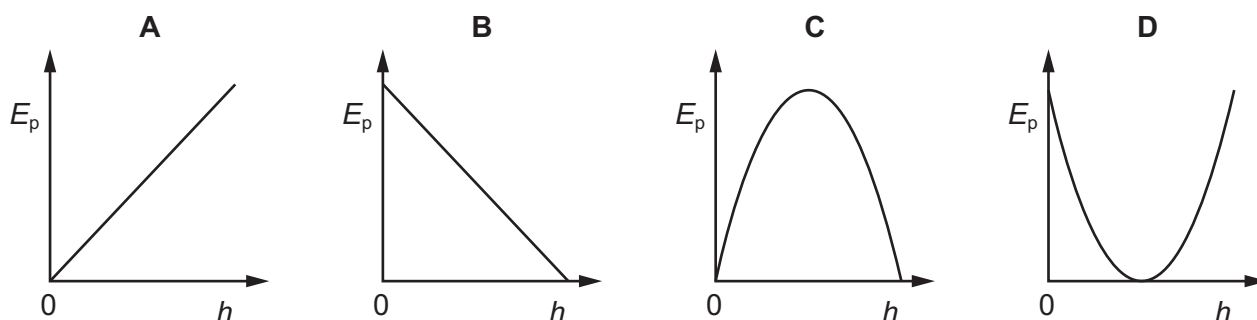


- 17 An object is thrown into the air.

Which graph shows how the gravitational potential energy  $E_p$  of the object varies with height  $h$  above the ground?



- 18 A car of mass 1800 kg accelerates along a horizontal road so that its speed increases from  $20 \text{ m s}^{-1}$  to  $25 \text{ m s}^{-1}$  in a time of 5.4 s.

What is the average useful power output of the car's engine?

- A** 4.2 kW      **B** 38 kW      **C** 120 kW      **D** 1100 kW

- 19 A variable force is applied to ensure that a constant power is supplied to a train.

Which graph best shows the variation of the force  $F$  applied with the velocity  $v$  of the train?

