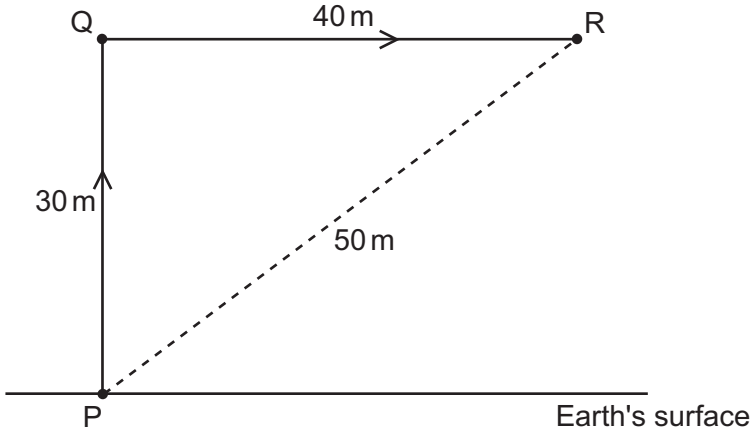
17 A motorist travelling at $10\,m\,s^{-1}$ can bring his car to rest in a braking distance of 10 m.

In what distance could he bring the car to rest from a speed of $30\,m\,s^{-1}$ using the same braking force?

A 17 m **B** 30 m **C** 52 m **D** 90 m

18 A stone of weight 4.0 N in the Earth's gravitational field is moved from P to Q and then to R along the path shown.



How much potential energy does the stone gain?

A 120 J **B** 200 J **C** 280 J **D** 1200 J

19 Below are four short paragraphs describing the molecules in a beaker of water at 50 °C.

Which paragraph correctly describes the molecules?

A The molecules all travel at the same speed. This speed is not large enough for any of the molecules to leave the surface of the water. There are attractive forces between the molecules.

B The molecules have a range of speeds. Some molecules travel sufficiently fast to leave the surface of the water. There are no forces between the molecules.

C The molecules have a range of speeds. Some molecules travel sufficiently fast to leave the surface of the water. There are attractive forces between the molecules.

D The molecules have a range of speeds. The fastest molecules are unable to leave the surface of the water. There are attractive forces between the molecules.