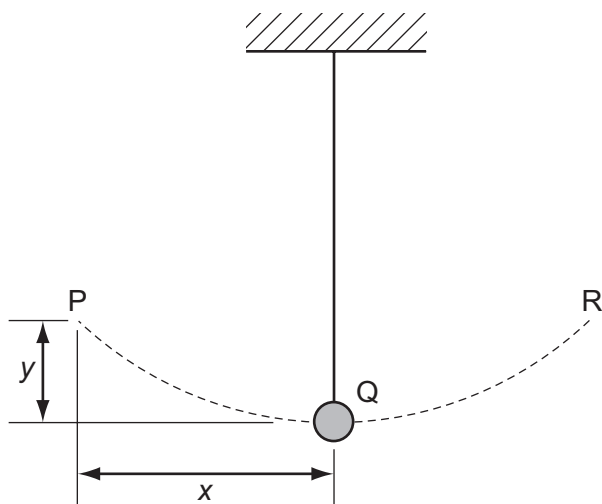


- 17 A pendulum bob oscillates between P and R.



Assuming the gravitational potential energy lost in moving from P to Q is converted into kinetic energy, what is the speed of the bob at Q?

- A**  $\sqrt{2gx}$       **B**  $2gx$       **C**  $\sqrt{2gy}$       **D**  $2gy$
- 18 Which operation involves the greatest mean power?
- A** a car moving against a resistive force of 0.4 kN at a constant speed of  $20 \text{ m s}^{-1}$   
**B** a crane lifting a weight of 3 kN at a speed of  $2 \text{ m s}^{-1}$   
**C** a crane lifting a weight of 5 kN at a speed of  $1 \text{ m s}^{-1}$   
**D** a weight being pulled across a horizontal surface at a speed of  $6 \text{ m s}^{-1}$  against a frictional force of 1.5 kN
- 19 Which properties best describe modelling clay?
- A** brittle and ductile  
**B** ductile and elastic  
**C** elastic and plastic  
**D** plastic and ductile
- 20 Why does the pressure of a gas increase when the gas is compressed at constant temperature?
- A** The gas molecules collide more often with each other.  
**B** The gas molecules expand under pressure.  
**C** The gas molecules hit the walls of the container more frequently.  
**D** The gas molecules travel faster.