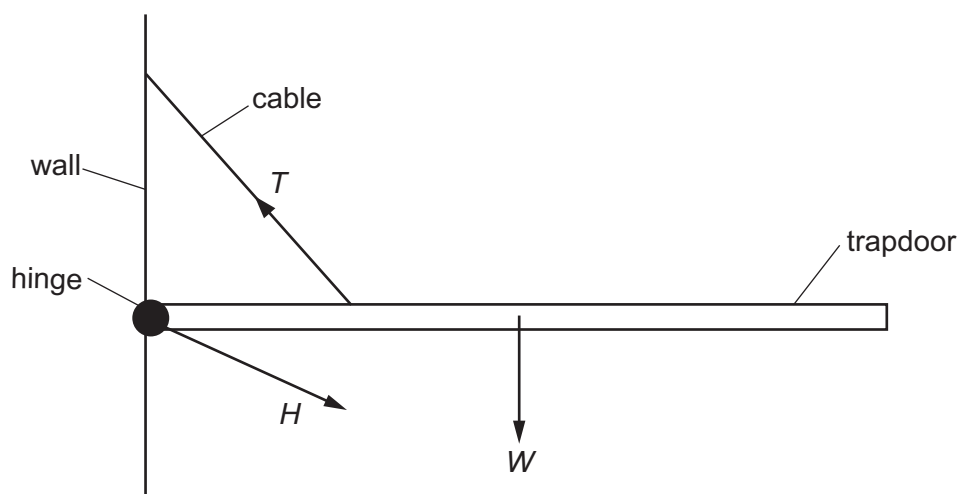


- 14 A hinged trapdoor is held closed in the horizontal position by a cable.

Three forces act on the trapdoor: the weight  $W$  of the door, the tension  $T$  in the cable and the force  $H$  at the hinge.



Which list gives the three forces in **increasing** order of magnitude?

- A**  $H, T, W$       **B**  $T, H, W$       **C**  $W, H, T$       **D**  $W, T, H$
- 15 What is the definition of force?
- A** the product of mass and acceleration  
**B** the product of mass and velocity  
**C** the rate of change of momentum  
**D** the rate of transfer of energy
- 16 A boat moves at a constant velocity  $v$  through still water.

A constant drag force  $F$  acts on the boat.

What is the power used by the boat to move through the water?

- A**  $\frac{1}{2}Fv$       **B**  $Fv$       **C**  $\frac{1}{2}Fv^2$       **D**  $Fv^2$