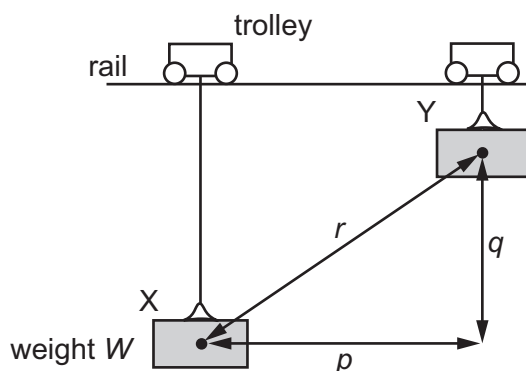


14 What is the average power output of a laser that can deliver 0.20 J of energy in 10 ns?

- A** 2 nW                      **B** 20 mW                      **C** 200 kW                      **D** 20 MW

15 A weight  $W$  hangs from a trolley that runs along a rail. The trolley moves horizontally through a distance  $p$  and simultaneously raises the weight through a height  $q$ .



As a result, the weight moves through a distance  $r$  from X to Y. It starts and finishes at rest.

How much work is done on the weight during this process?

- A**  $Wp$                       **B**  $W(p + q)$                       **C**  $Wq$                       **D**  $Wr$

16 The engine of a car exerts a force of 600 N in moving the car 1.0 km in 150 seconds.

What is the average output power of the engine?

- A** 4.0 W                      **B** 4.0 kW                      **C** 90 kW                      **D** 90 MW

17 Which statement about boiling and evaporation is correct?

- A** Boiling can only occur at the surface of a liquid.  
**B** Evaporation can only occur at a fixed temperature.  
**C** Only boiling involves a change of phase.  
**D** When some of a liquid evaporates, the rest of the liquid becomes cooler.

**Space for working**