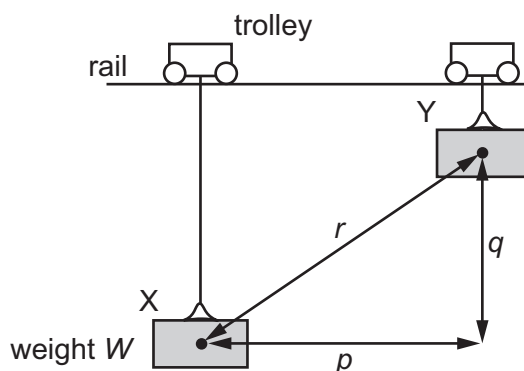


14 What is the average power output of a laser that can deliver 0.20 J of energy in 10 ns?

- 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**