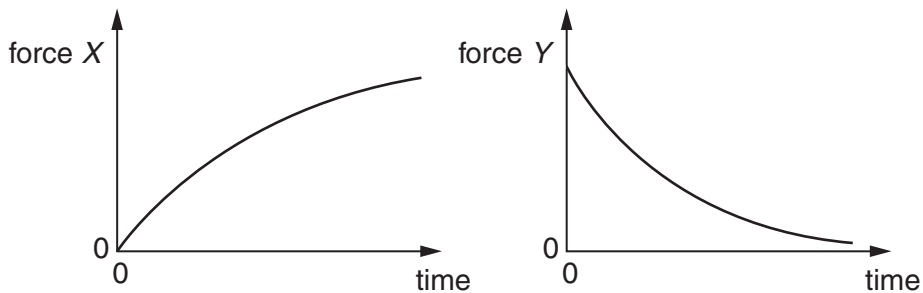


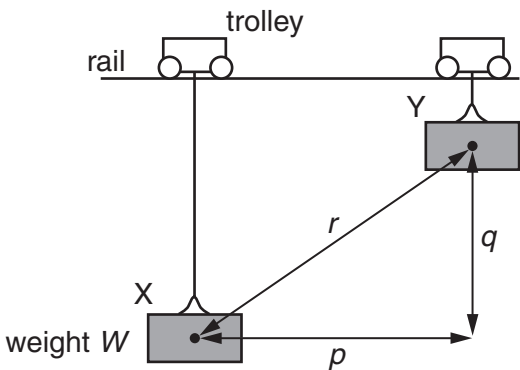
- 15 A ball falls from rest through air and eventually reaches a constant velocity.
- For this fall, forces  $X$  and  $Y$  vary with time as shown.



What are forces  $X$  and  $Y$ ?

	force $X$	force $Y$
A	air resistance	resultant force
B	air resistance	weight
C	upthrust	resultant force
D	upthrust	weight

- 16 Which of the following expressions **defines** power?
- A force x distance moved in the direction of the force
- B force x velocity
- C work done ÷ time taken
- D work done x time taken
- 17 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  $Wr$