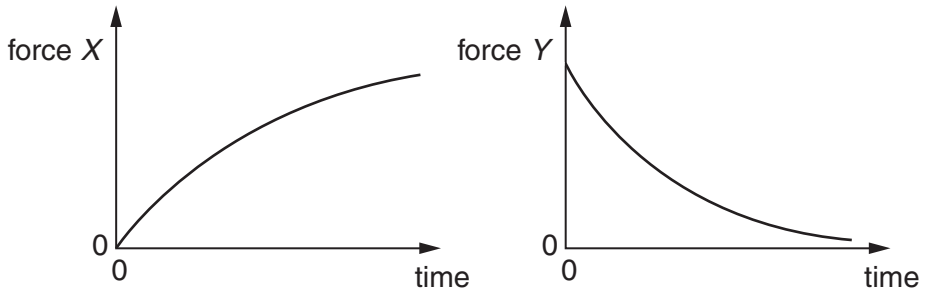
15 A ball falls from rest through air and eventually reaches a constant velocity.

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?

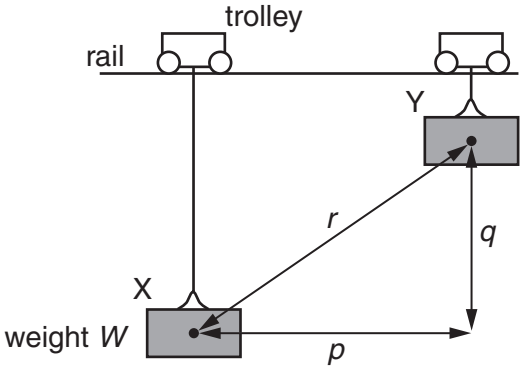
A force x distance moved in the direction of the force

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