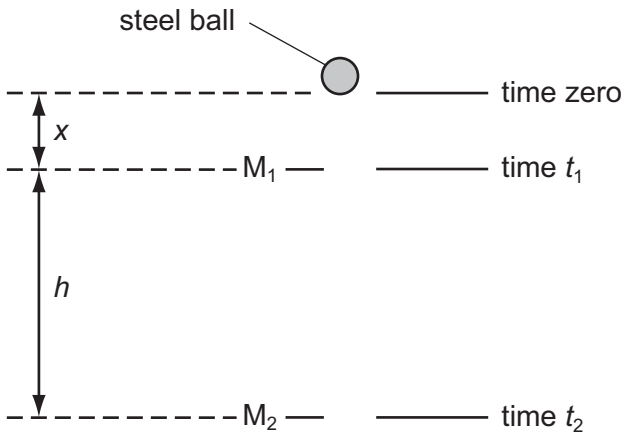
7 Two markers M_1 and M_2 are set up a vertical distance h apart.

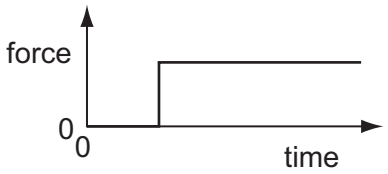


A steel ball is released at time zero from a point a distance x above M_1. The ball reaches M_1 at time t_1 and reaches M_2 at time t_2. The acceleration of the ball is constant.

Which expression gives the acceleration of the ball?

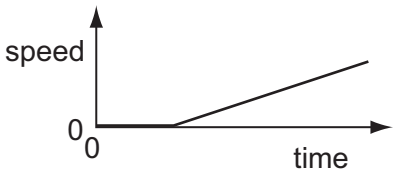
A $\frac{2h}{t_2^{\,2}}$ **B** $\frac{2h}{(t_2+t_1)}$ **C** $\frac{2h}{(t_2-t_1)^2}$ **D** $\frac{2h}{(t_2^{\,2}-t_1^{\,2})}$

8 A car driver sharply presses down the accelerator when the traffic lights go green. The resultant horizontal force acting on the car varies with time as shown.



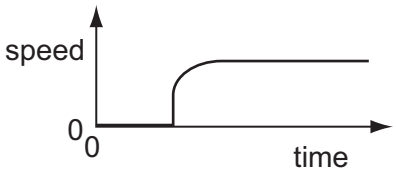
Which graph shows the variation with time of the speed of the car?

A



B

C



D