

9 In order that a train can stop safely, it will always pass a signal showing a yellow light before it reaches a signal showing a red light. Drivers apply the brake at the yellow light and this results in a uniform deceleration to stop exactly at the red light.

The distance between the red and yellow lights is x .

What must be the minimum distance between the lights if the train speed is increased by 20 %, without changing the deceleration of the trains?

A $1.20x$

B $1.25x$

C $1.44x$

D $1.56x$

10 The gravitational field strength on the surface of planet B is one tenth of that on the surface of