

- 30.** A truck accelerates uniformly along a straight, horizontal road. The mass of the truck is 2.0×10^4 kg.

(a) The speed of the truck increases from rest to 12 m/s in 30 s.

Calculate

(i) the distance travelled by the truck during this time,

distance =[2]

(ii) the resultant force on the truck.

resultant force =[4]

(b) To maintain a uniform acceleration, the forward force on the truck must change. Explain why.

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[2]

[Total: 8]