

- 10 A group of students investigating the principle of conservation of momentum use a small truck travelling over a frictionless surface.

Sand is dropped into the truck as it passes X. At Y, a trapdoor in the bottom of the truck opens and the sand falls out.



How does the velocity of the truck change when the sand is added to the truck at X and then leaves the truck at Y?

	at X	at Y
A	decreases	increases
B	decreases	stays the same
C	stays the same	increases
D	stays the same	stays the same

- 11 An object of mass 20 kg is travelling at a constant speed of 6.0 m s^{-1}