

- 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
<b>A</b>	decreases	increases
<b>B</b>	decreases	stays the same
<b>C</b>	stays the same	increases
<b>D</b>	stays the same	stays the same

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