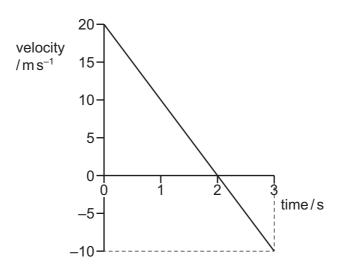
6 The graph shows how the velocity of a ball varies with time from the moment it is hit vertically upwards from the ground.



What is the displacement of the ball from the ground after a time of 3.0 s?

- **A** 15 m
- **B** 25 m
- **C** 30 m
- **D** 45 m
- 7 Two students each throw a ball horizontally from the top of a tower. The two balls are released at the same time.

The first student throws her ball with a speed of $20\,\mathrm{m\,s^{-1}}$ and the second student throws his ball with a speed of $10\,\mathrm{m\,s^{-1}}$.

Assume air resistance is negligible and that the balls land on horizontal ground.

Which row describes the horizontal distances travelled and the landing times of the two balls on the ground?

| | horizontal distances | landing times |
|---|-------------------------|---------------|
| Α | same | same |
| В | same | different |
| С | different | same |
| D | different | different |