

8 A football of mass 0.42 kg is travelling towards a player at 3.0 ms^{-1} .

The player kicks the ball with an impulse of 6.3 Ns , returning it in the direction of approach.

What is the new speed of the ball?

- A 4.6 ms^{-1}
- B 6.2 ms^{-1}
- C 12 ms^{-1}
- D 18 ms^{-1}