

Solutionbank M1

Heinemann Modular Maths for Edexcel AS and A-level

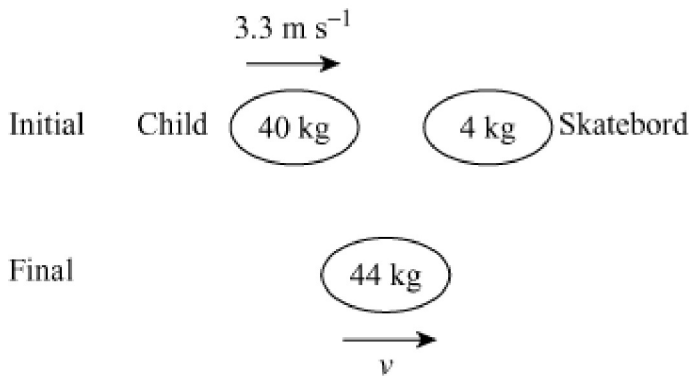
8 Momentum

Exercise A, Question 6

Question:

A child of mass 40 kg jumps onto a stationary skateboard of mass 4 kg. If the child was moving horizontally at 3.3 m s^{-1} just before he lands on the skateboard, find the speed at which they move.

Solution:



Using conservation of momentum

$$40 \times 3.3 = 44v$$

$$v = 3$$

Combined speed is 3 m s^{-1} .

© Harcourt Education Ltd 2005