

# Solutionbank M1

Heinemann Modular Maths for Edexcel AS and A-level

## 5 Newton's laws of motion

### Exercise B, Question 10

#### Question:

A particle of mass  $m$  kg slides down a smooth plane, inclined at an angle of  $30^\circ$  to the horizontal. Find the acceleration of the particle down the plane.

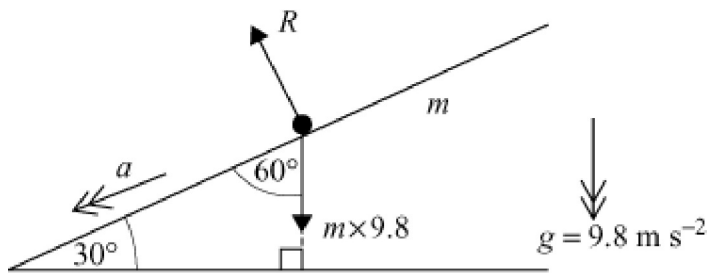
#### Solution:

Newton's 2nd Law down plane

$$(m \times 9.8) \cos 60^\circ = m \times a$$

$$\therefore a = 9.8 \cos 60^\circ$$

$$a = 4.9 \text{ m s}^{-2}$$



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