

# Solutionbank M1

Heinemann Modular Maths for Edexcel AS and A-level

## 5 Newton's laws of motion

### Exercise C, Question 2

#### Question:

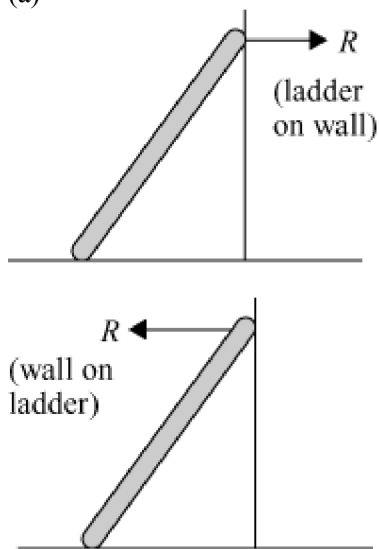
A ladder leans against a smooth wall.

(a) Draw diagrams to show the force that the top of the ladder exerts on the wall and the force that the wall exerts on the top of the ladder.

(b) Use Newton's third law to explain why these forces have equal magnitudes.

#### Solution:

(a)



(b) If they are not equal and opposite, then there is a resultant force at the point and the ladder will move. Newton's third law says that they exert equal and opposite forces on each other.