

# Solutionbank M1

Heinemann Modular Maths for Edexcel AS and A-level

## 4 Forces

### Exercise C, Question 2

#### Question:

Find the magnitude of the resultant of the forces  $(2i + j)$  N,  $(3i - 2j)$  N and  $(-2i + 4j)$  N.

#### Solution:

$$R = (2i + j) + (3i - 2j) + (-2i + 4j)$$

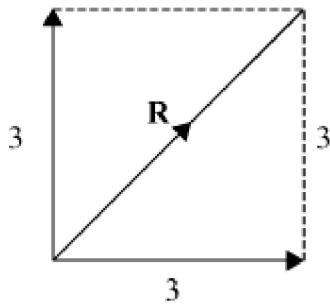
$$R = 3i + 3j$$

$$\therefore |R| = \sqrt{3^2 + 3^2}$$

$$|R| = \sqrt{18}$$

$$|R| = 4.2426\dots$$

$$\text{i.e. } |R| = 4.24 \text{ N (3 s.f.)}$$



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