

# Solutionbank M1

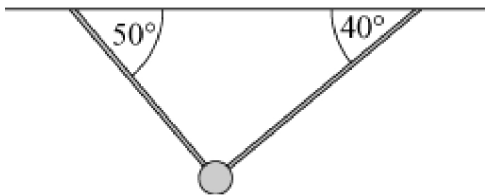
Heinemann Modular Maths for Edexcel AS and A-level

## 4 Forces

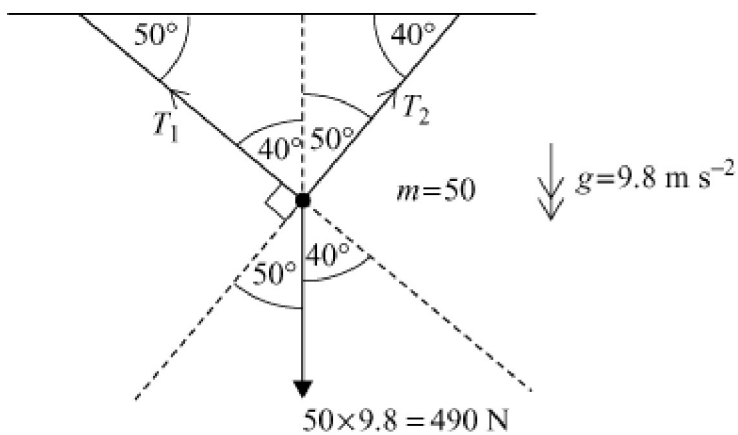
### Exercise Test yourself, Question 3

#### Question:

The diagram shows an object of mass 50 kg, which is supported by two cables. Find the tension in each of the supporting cables.



#### Solution:



Resolving perpendicular to  $T_1$

$$T_2 = 490 \times \cos 50^\circ$$

$$T_2 = 314.96\dots$$

$$T_2 = 315 \text{ N (3 s.f.)}$$

Resolving perpendicular to  $T_2$

$$T_1 = 490 \times \cos 40^\circ$$

$$T_1 = 375.36\dots$$

$$T_1 = 375 \text{ N (3 s.f.)}$$