

# MU123 quiz

## *Discovering mathematics*

### Question 1

If the temperature at 2 am on Wednesday is  $-5^{\circ}\text{C}$  and 12 hours later it is  $3^{\circ}\text{C}$ , by how many degrees has the temperature risen?

### Question 2

You are considering buying carpet tiles for a room you are decorating. In which of the following sizes are the tiles likely to be available? Give a reason for your choice.

- (a) 15 mm by 15 mm
- (b) 3 m by 3 m
- (c) 30 cm by 30 cm
- (d) 1.5 km by 1.5 km

### Question 3

Calculate the following.

- (a)  $(-2) \times (-1.5)$
- (b)  $\frac{2}{5} + \frac{3}{4}$
- (c)  $\frac{2}{3} \times 1\frac{4}{5}$
- (d)  $2.13 + (-5.74)$
- (e)  $(-27) \div 3$
- (f)  $5^2$

*In questions 4, 5 and 6 use a calculator if you feel you need to.*

### Question 4

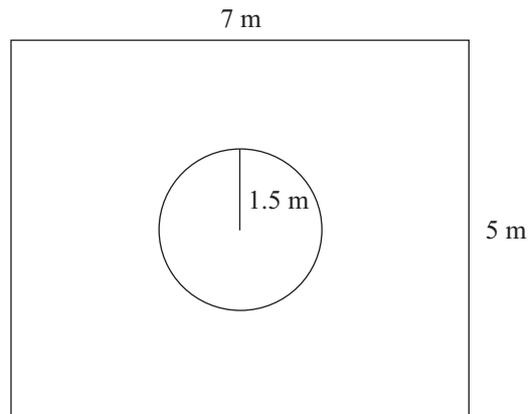
A store is offering 15% off all electrical goods during its summer sale. What would you pay for a washing machine that usually costs £310?

### Question 5

A family on holiday in Florida is considering buying a souvenir which is on sale for \$22. If the rate of exchange at the time is  $\text{£}1 = \$1.42$  approximately how much does the souvenir cost in pounds?

### Question 6

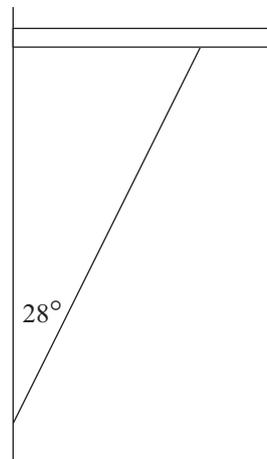
This is a plan of a garden.



The owner intends to have a circular flower bed in the middle of a lawn. If 400 grams of grass seed covers 8 square metres, how much grass seed will be needed to re-seed the lawn? (Give your answer to the nearest 100 gram.) The area of a circle is  $\pi \times \text{radius}^2$ , where  $\pi$  is 3.14159...

### Question 7

A plan from a DIY booklet shows a shelf and its metal bracket. The shelf makes a right angle with the wall.



The size of one of the angles is given; what are the sizes of the other two angles in this triangle?

[END OF QUESTIONS]