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) \(\frac{2}{3} \times \frac{4}{5}\)
(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 £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]