1 In London, 1 litre of petrol costs 108.9p
In New York, 1 US gallon of petrol costs \$2.83

    1 US gallon = 3.785 litres
    £1 = \$1.46

In which city is petrol better value for money, London or New York?
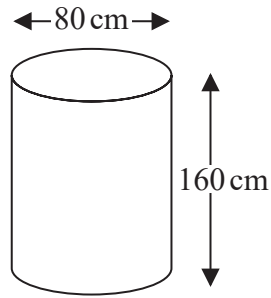You must show your working.

(Total for Question 1 is 3 marks)

Autumn 2019 Paper 3 Q5

2   Write $37\,\text{cm}^3$ in mm^3

.... mm^3

(Total for Question 2 is 1 mark)

3 Karina has 4 tanks on her tractor.
Each tank is a cylinder with diameter 80 cm and height 160 cm.

←80 cm→

160 cm

The 4 tanks are to be filled completely with a mixture of fertiliser and water.

The fertiliser has to be mixed with water in the ratio 1 : 100 by volume.
Karina has 32 litres of fertiliser.

1 litre = 1000 cm³

Has Karina enough fertiliser for the 4 tanks?
You must show how you get your answer.

(Total for Question 3 is 4 marks)

4 (a) Change $8000 \, cm^3$ to m^3

.... m^3

(1)

(b) Change a speed of $180 \, km$ per hour to metres per second.

.... metres per second

(3)

(Total for Question 4 is 4 marks)

5 In Spain, Sam pays 27 euros for 18 litres of petrol.
In Wales, Leo pays £40.80 for 8 gallons of the same type of petrol.

1 euro = £0.85
4.5 litres = 1 gallon

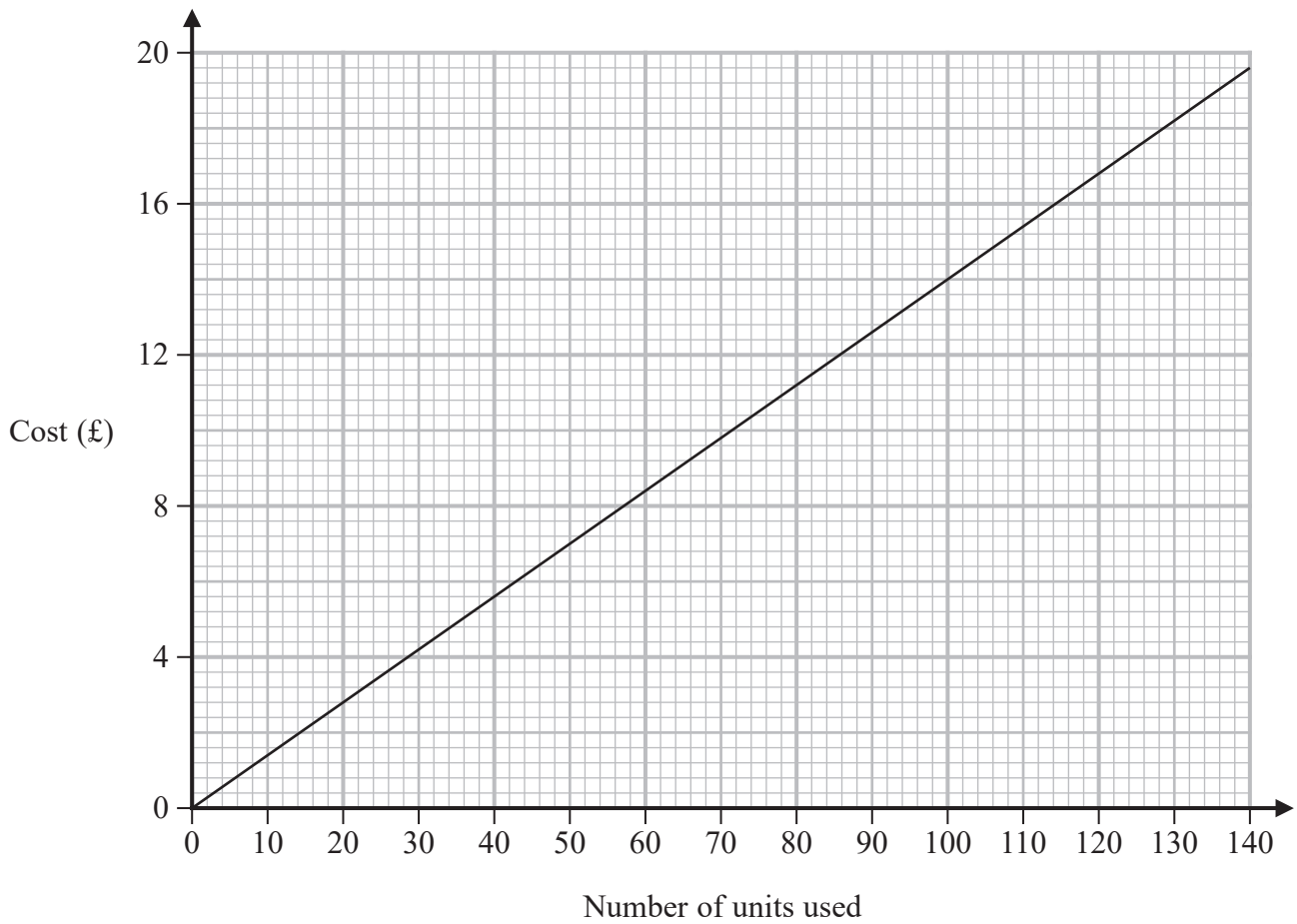Sam thinks that petrol is cheaper in Spain than in Wales.

Is Sam correct?
You must show how you get your answer.

(Total for Question 5 is 4 marks)

6 An electricity company charges the same fixed amount for each unit of electricity used.

David uses this graph to work out the total cost of the electricity he has used.

(a) Work out the gradient of the straight line.

....

(2)

(b) What does the gradient of this line represent?

....

....

....

(1)

(Total for Question 6 is 3 marks)