Name ANSWERS	Class

MATHS TEACHER HUB

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Conversion graphs

(9 – 1) Topic booklet

Foundation

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** question, you may use a calculator to help you answer.

Information

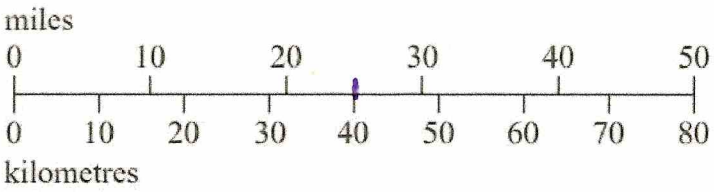
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Answer ALL questions
Write your answers in the space provided.
You must write down all the stages in your working.

9 This scale can be used to change between kilometres and miles.



(a) Use the scale to change 40 kilometres to miles.

25 ..... miles

(1)

Here is an approximate rule to change from kilometres to miles.

Divide the distance in kilometres by 10 and then multiply by 6

(b) Use this approximate rule to change 40 kilometres to miles.

$\frac{40}{10} \times 6$

24 ..... miles

(2)

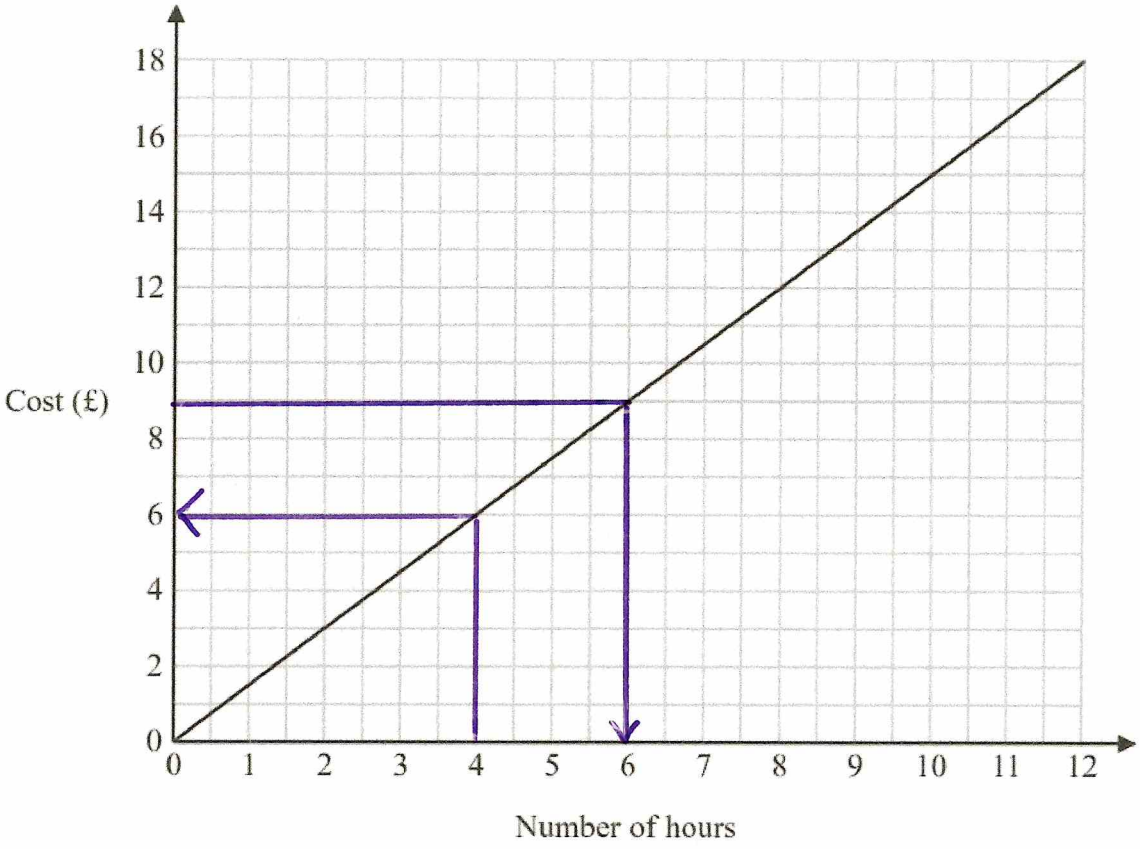
(c) Compare your answer to part (b) with your answer to part (a).

They are both very close.

(1)

(Total for Question 9 is 4 marks)

10 This graph can be used to find the cost of parking a car in a car park for up to 12 hours.



(a) Use the graph to find the cost of parking a car for 4 hours.

£ 6

(1)

Justin drives into the car park at 08 00 in the morning.
When he drives out of the car park he has to pay £9

(b) At what time does Justin drive out of the car park?

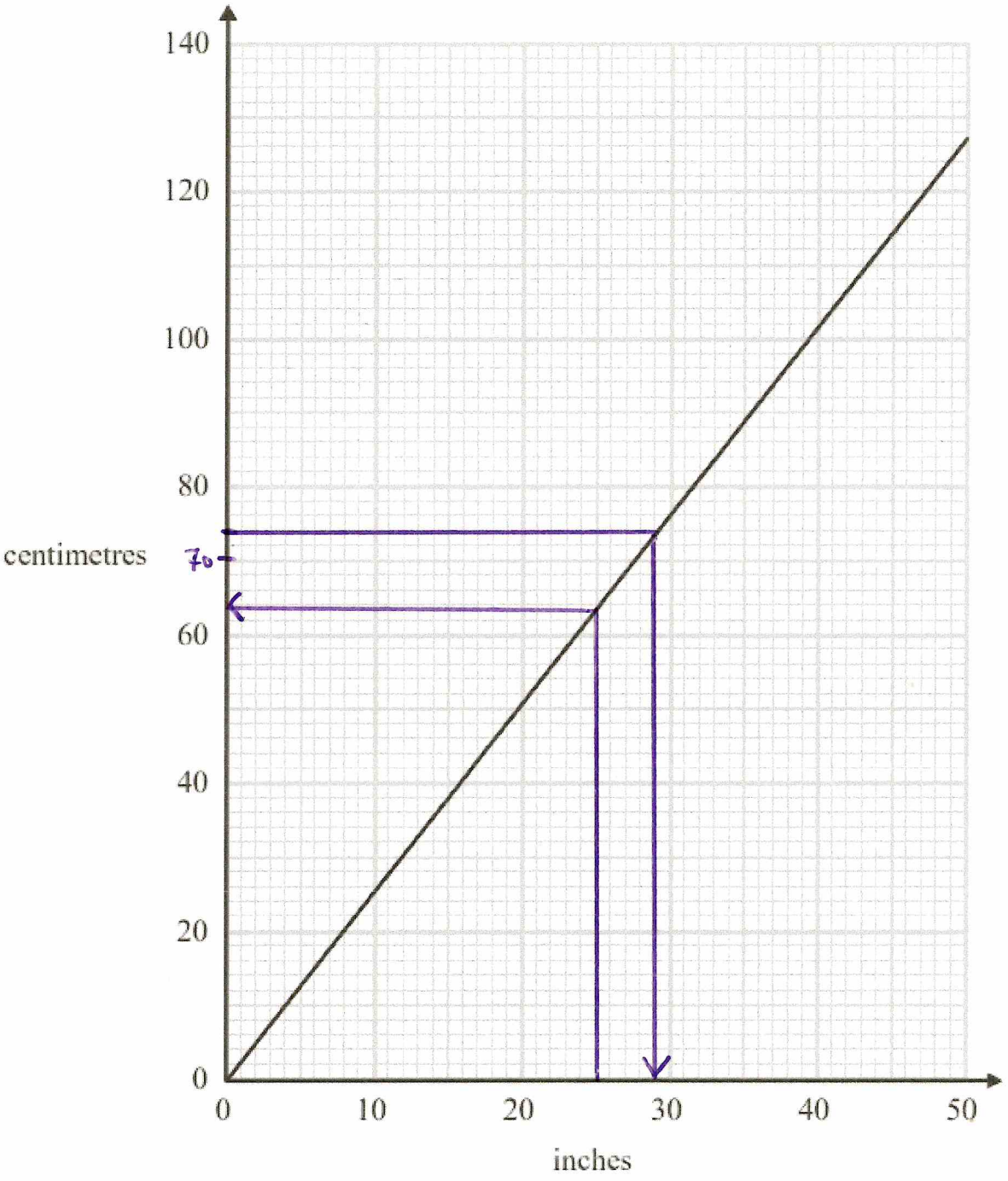
£9 = 6 hours

14:00

(3)

(Total for Question 10 is 4 marks)

11 You can use this graph to change between inches and centimetres.



(a) Change 74 cm to inches.

29 inches

(1)

Daniel's height is 6 feet 3 inches.

1 foot = 12 inches

(b) What is Daniel's height in centimetres?

6 foot = 72 inches

6ft 3in = 75 inch.

25 inches = 64cm

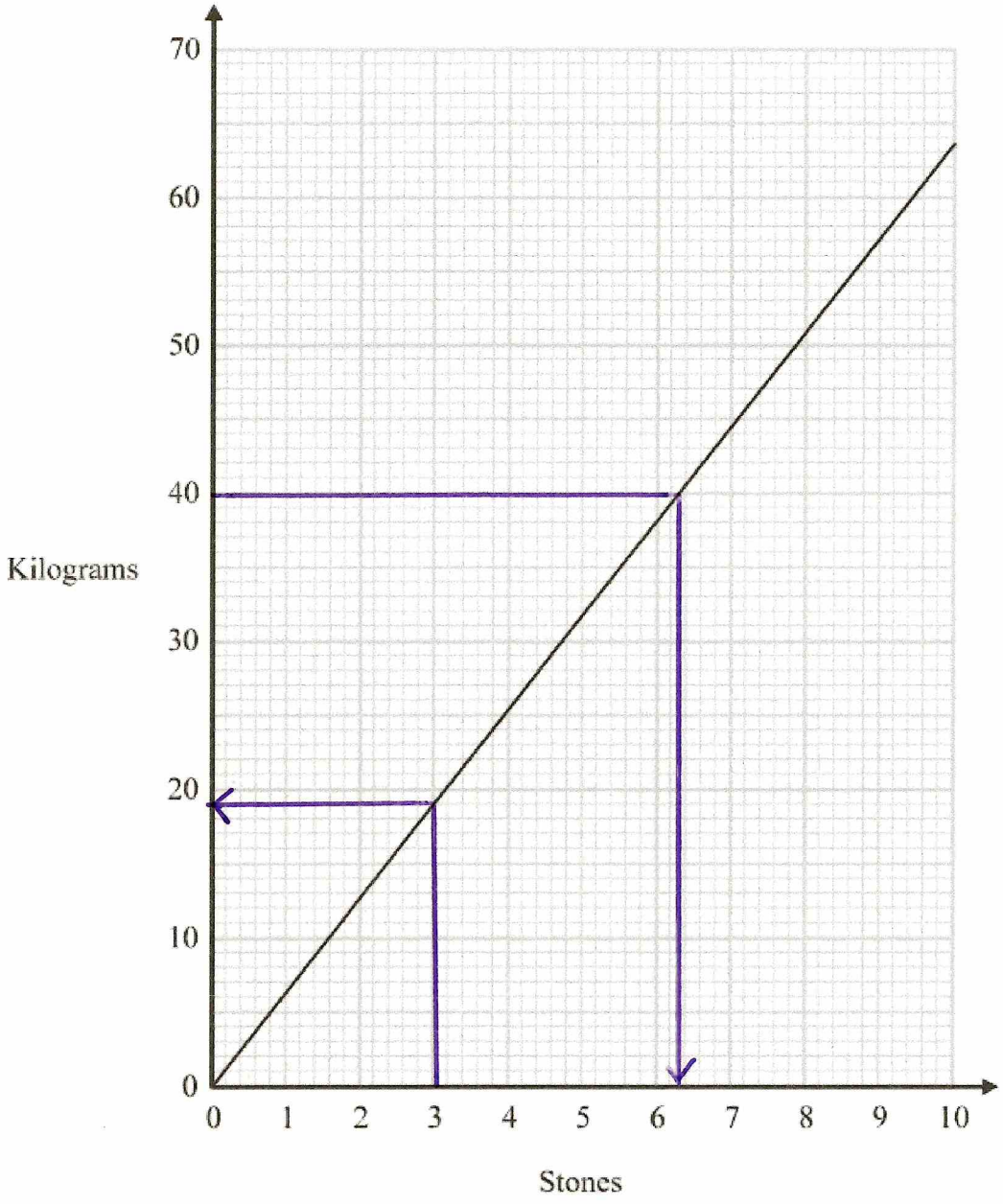
75 inches = 192cm

192 centimetres

(3)

(Total for Question 11 is 4 marks)

11 You can use this graph to change between stones and kilograms.



(a) Change 3 stones to kilograms.

19 kilograms

(1)

(b) Change 80 kilograms to stones.

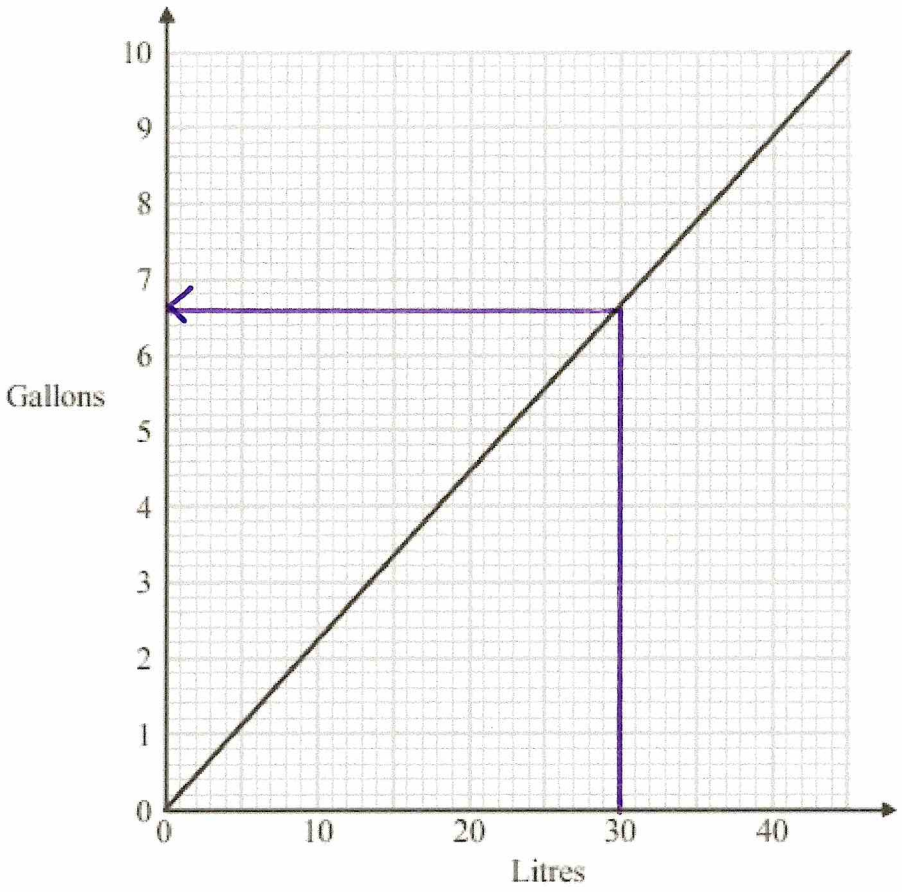
40kg = 6·3stone
80kg = 12·6stone

12·6 stones

(2)

(Total for Question 11 is 3 marks)

11 You can use this graph to change between litres and gallons.



Which is the greater, 60 litres or 12 gallons?
You must show how you get your answer.

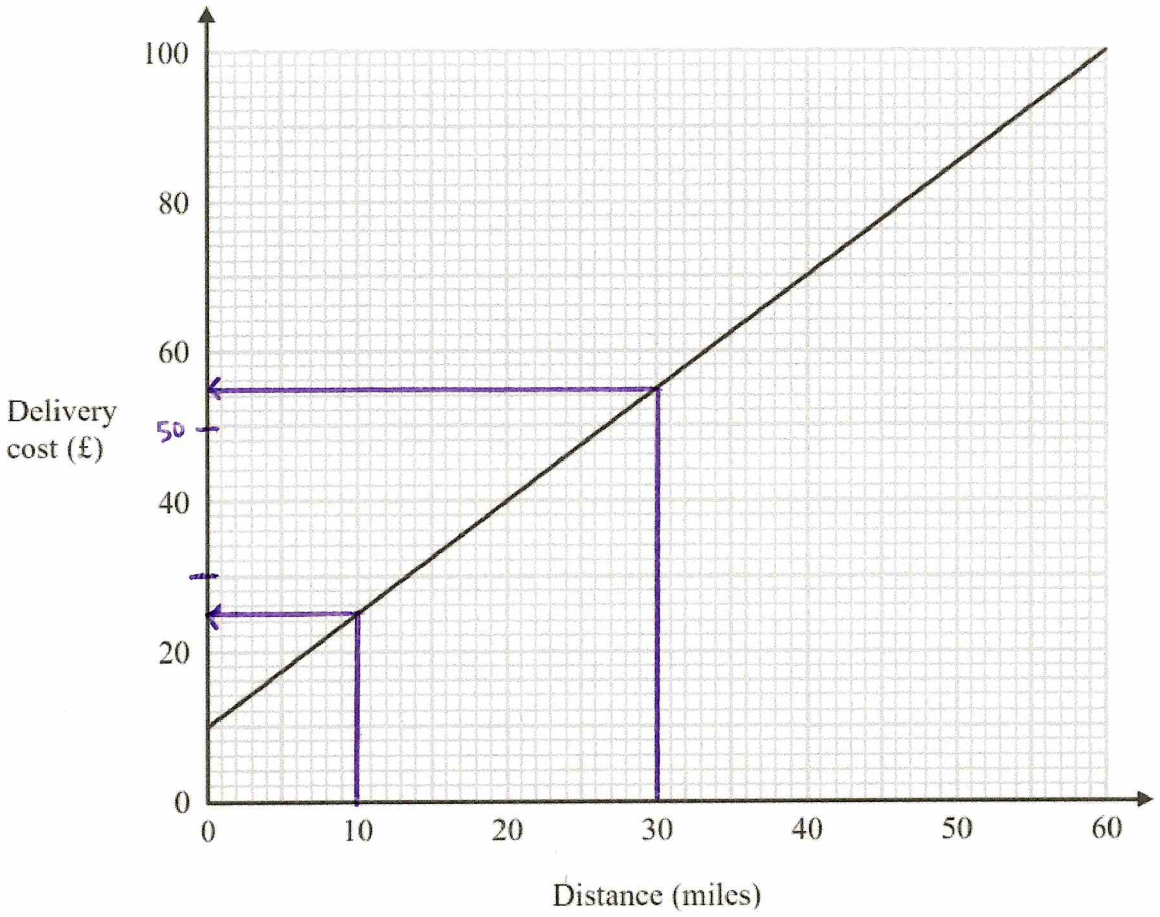
30 litres = 6·6 gallons
60 litres = 13·2 gallons

60 litres is greater

(Total for Question 11 is 2 marks)

12 Tom uses his lorry to deliver bricks.

You can use this graph to find the delivery cost for different distances.



For each delivery, there is a fixed charge plus a charge for the distance.

(a) How much is the fixed charge?

£ 10

(1)

Tom makes two deliveries of bricks.
The distance of one delivery is 20 miles more than the distance of the other delivery.

(b) Work out the difference between the two delivery costs.

10 miles = £25

30 miles = £55

£ 30

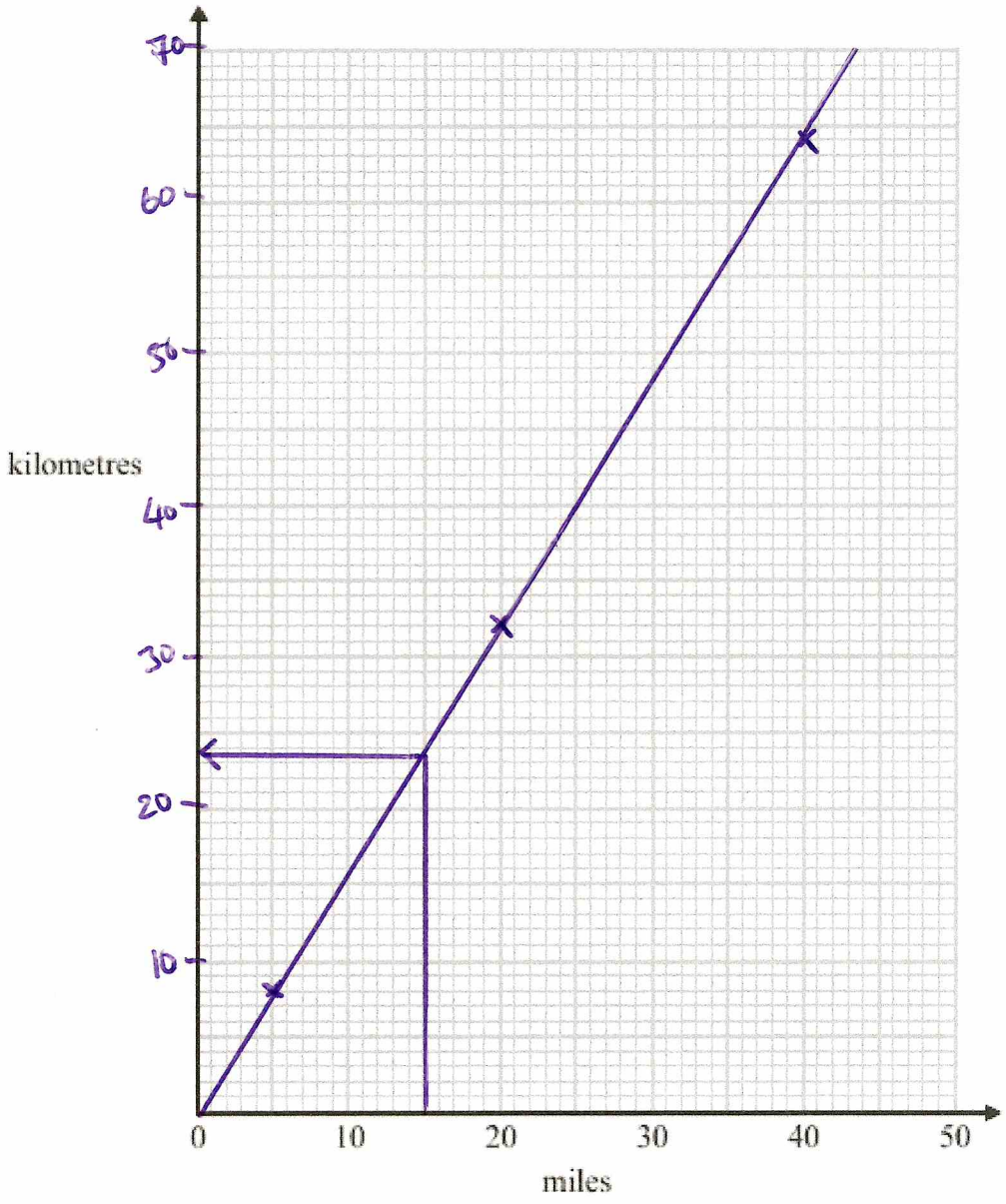
(2)

(Total for Question 12 is 3 marks)

12 You can use the information in the table to convert between kilometres and miles.

miles	0	5	20	40
kilometres	0	8	32	64

(a) Use this information to draw a conversion graph.



(b) Which is further, 20 kilometres or 15 miles?
You must show how you got your answer.

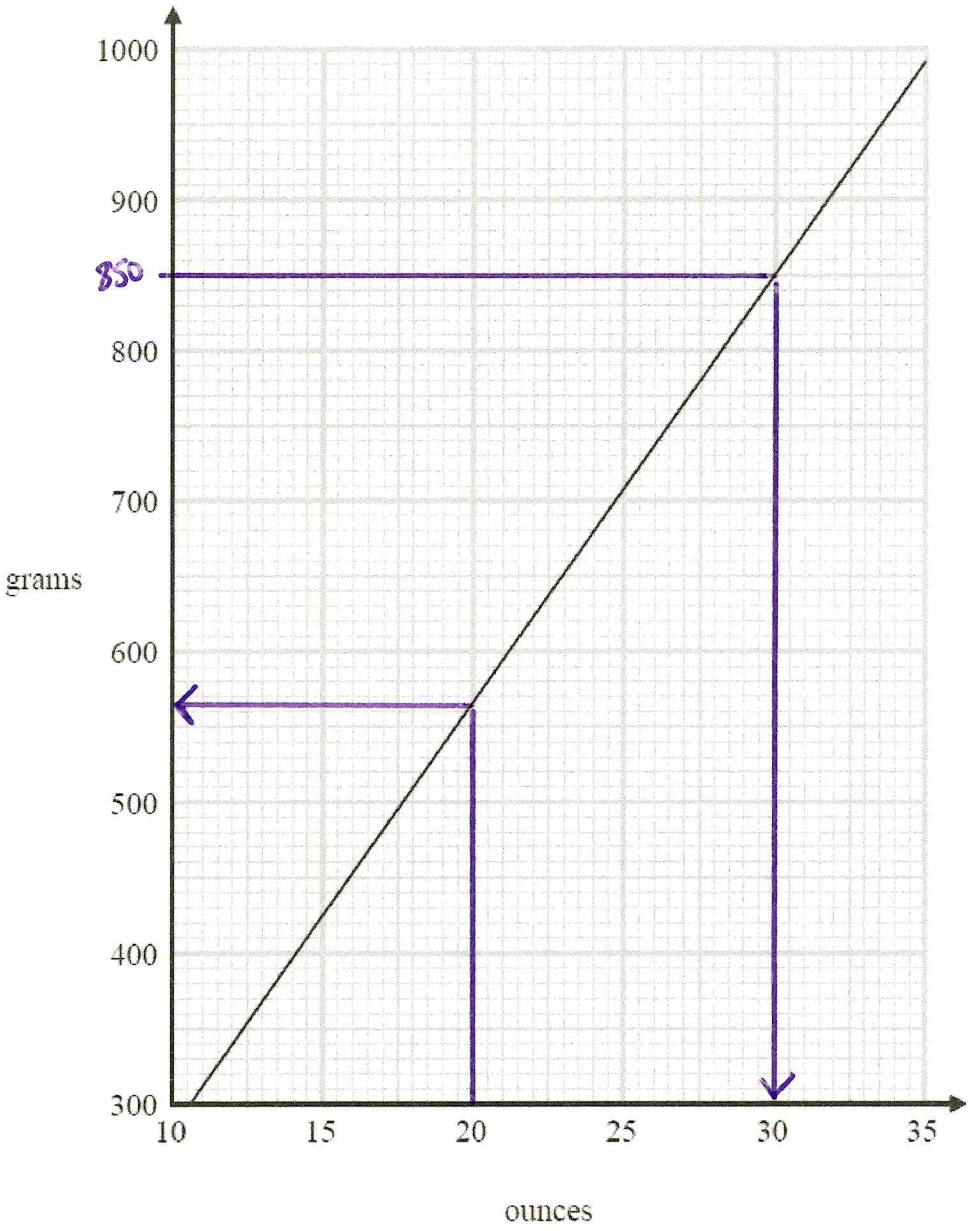
15 miles = 24 km

15 miles is further

(2)

(Total for Question 12 is 5 marks)

14 You can use this graph to change between ounces and grams.



(a) Change 850 grams to ounces.

30 ounces

(1)

(b) Change 80 ounces to grams.

20 ounces = 560g

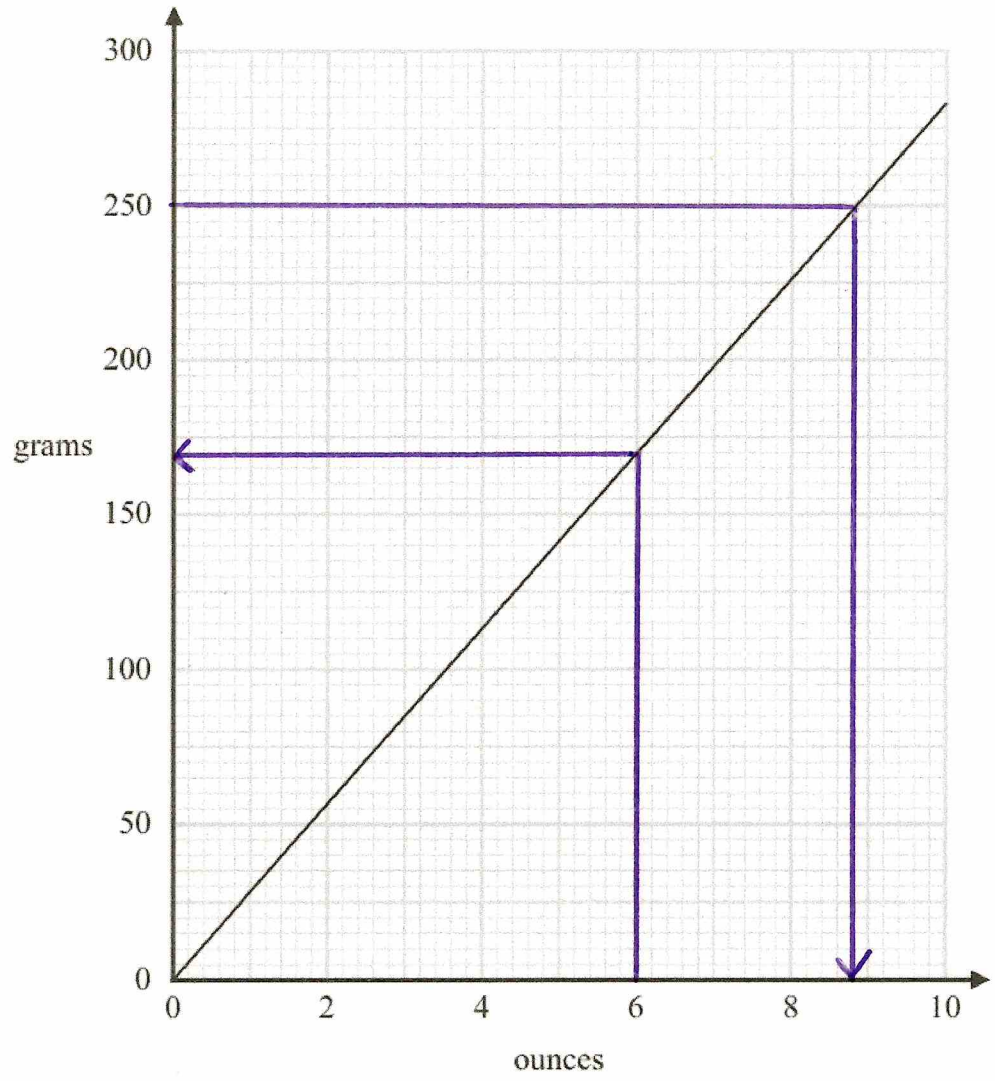
80 ounces = 2240g

2240 grams

(2)

(Total for Question 14 is 3 marks)

16 You can use this graph to change between ounces and grams.



(a) Change 6 ounces to grams.

170 grams

(1)

(b) Change 1 kg to ounces.

250g = 8.8ounce

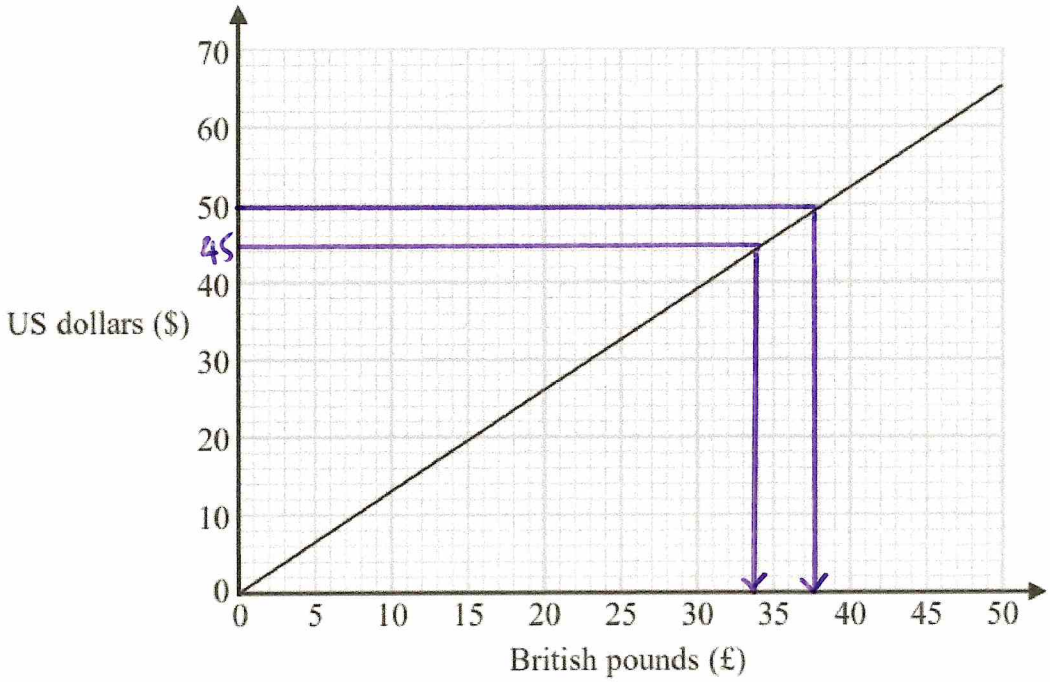
1000g = 35.2

35.2 ounces

(2)

(Total for Question 16 is 3 marks)

18 This graph can be used to change between US dollars ($) and British pounds (£).



Rosie bought a ring in the USA.
She paid 345 US dollars.

Work out in pounds the amount Rosie paid for the ring.

$50 = £37

$300 = £222

$45 = £34

$345 = £256

£ 256

(Total for Question 18 is 3 marks)