Name	Class

MATHS TEACHER HUB

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Conversion graphs

(9 – 1) Topic booklet

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.

miles
0   10   20   30   40   50
├───┼───┼───┼───┼───┼───┼───┼───┤
0   10   20   30   40   50   60   70   80
kilometres
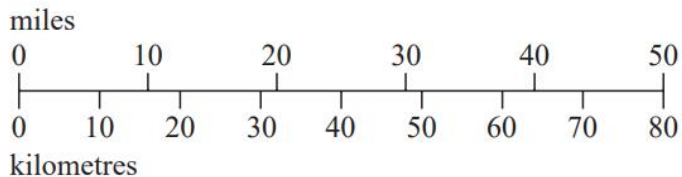
(a) Use the scale to change 40 kilometres to miles.

.... miles

(1)

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

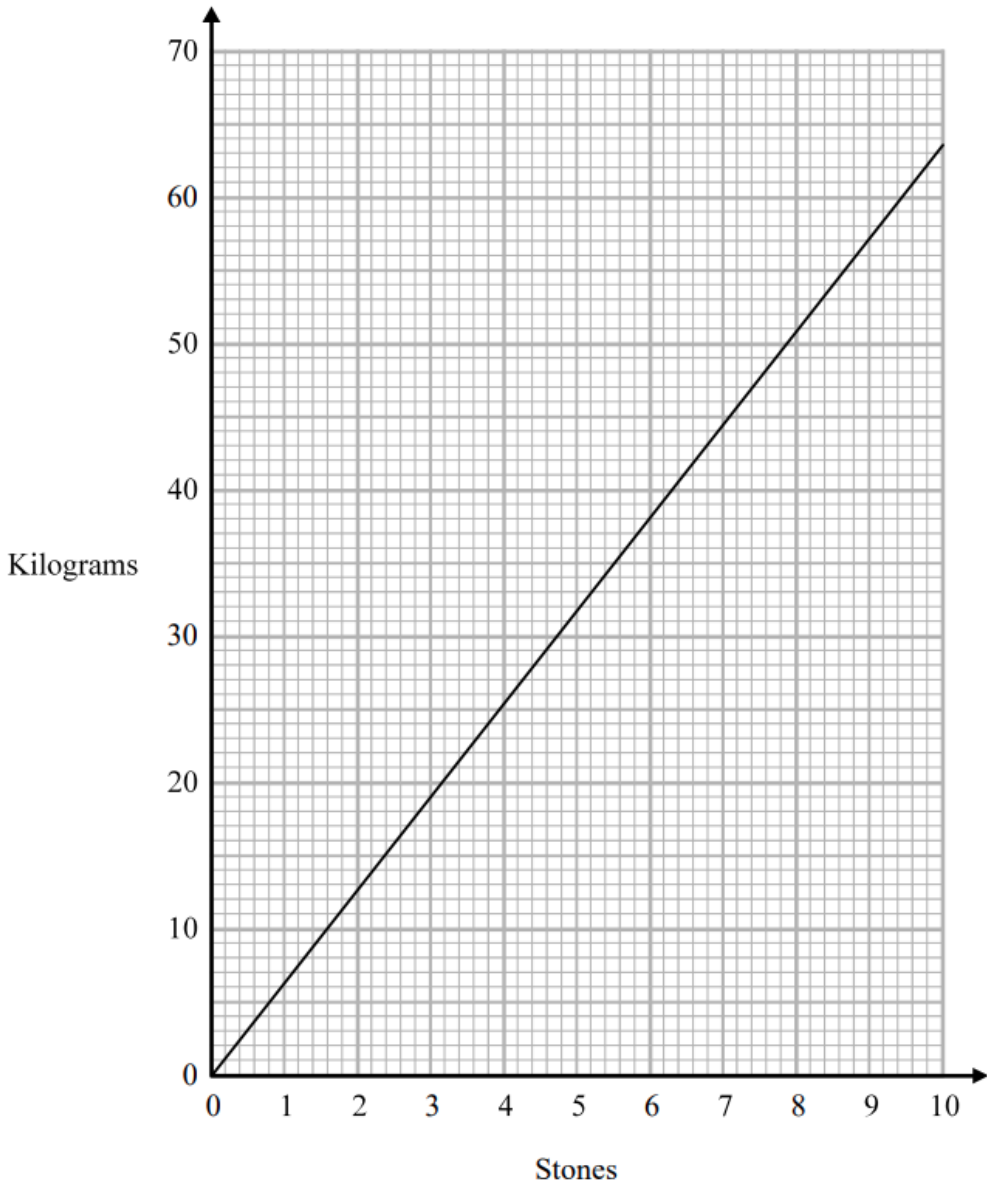> Divide the distance in kilometres by 10 and then multiply by 6

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

.... miles

(2)

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

....

....

....

(1)

(Total for Question 9 is 4 marks)

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

(a) Change 3 stones to kilograms.

.... kilograms

(1)

(b) Change 80 kilograms to stones.

.... stones

(2)

(Total for Question 11 is 3 marks)

11 You can use this graph to change between inches and centimetres.
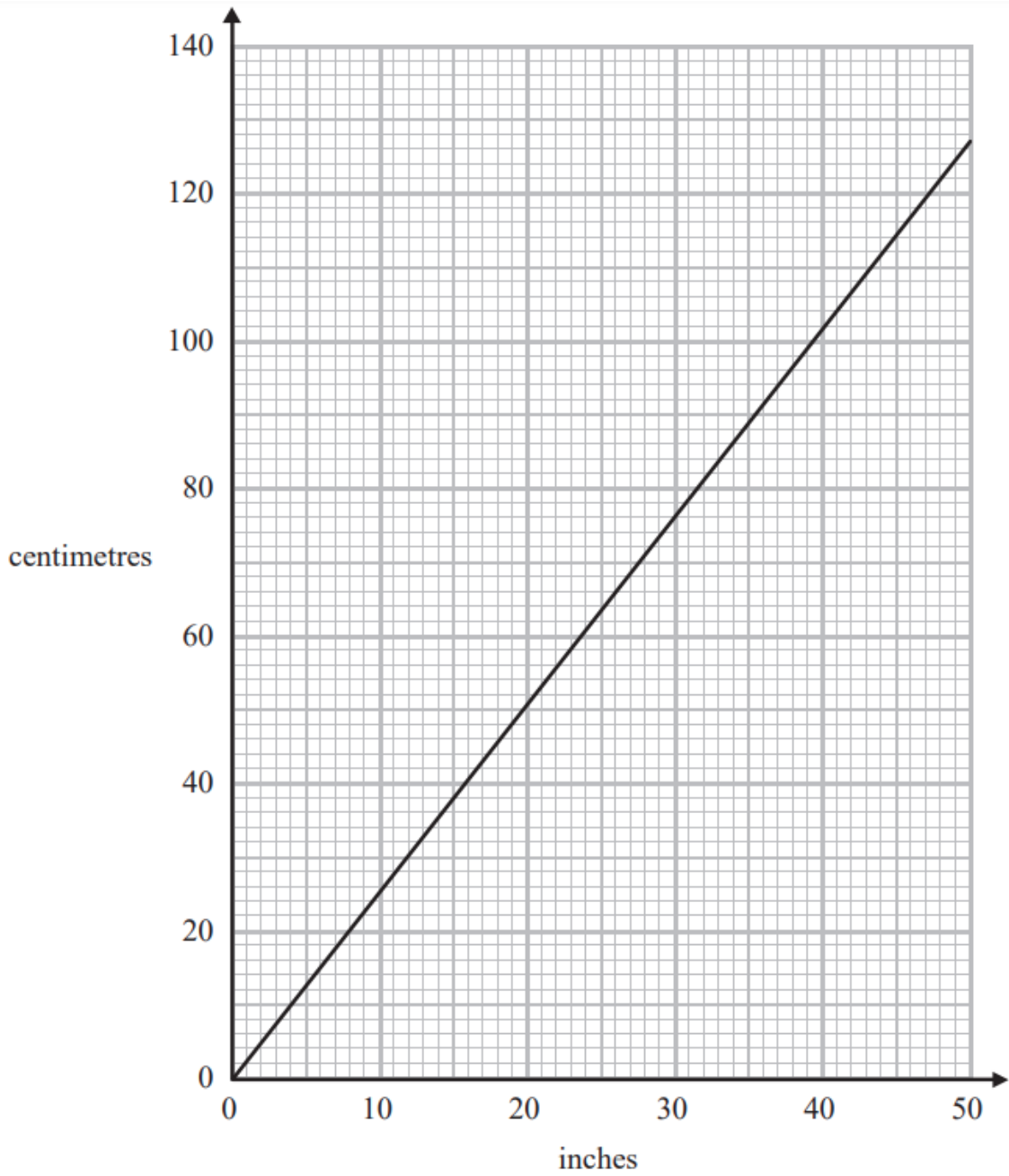
(a) Change 74 cm to inches.

.... inches

(1)

Daniel's height is 6 feet 3 inches.

1 foot = 12 inches

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

.... centimetres
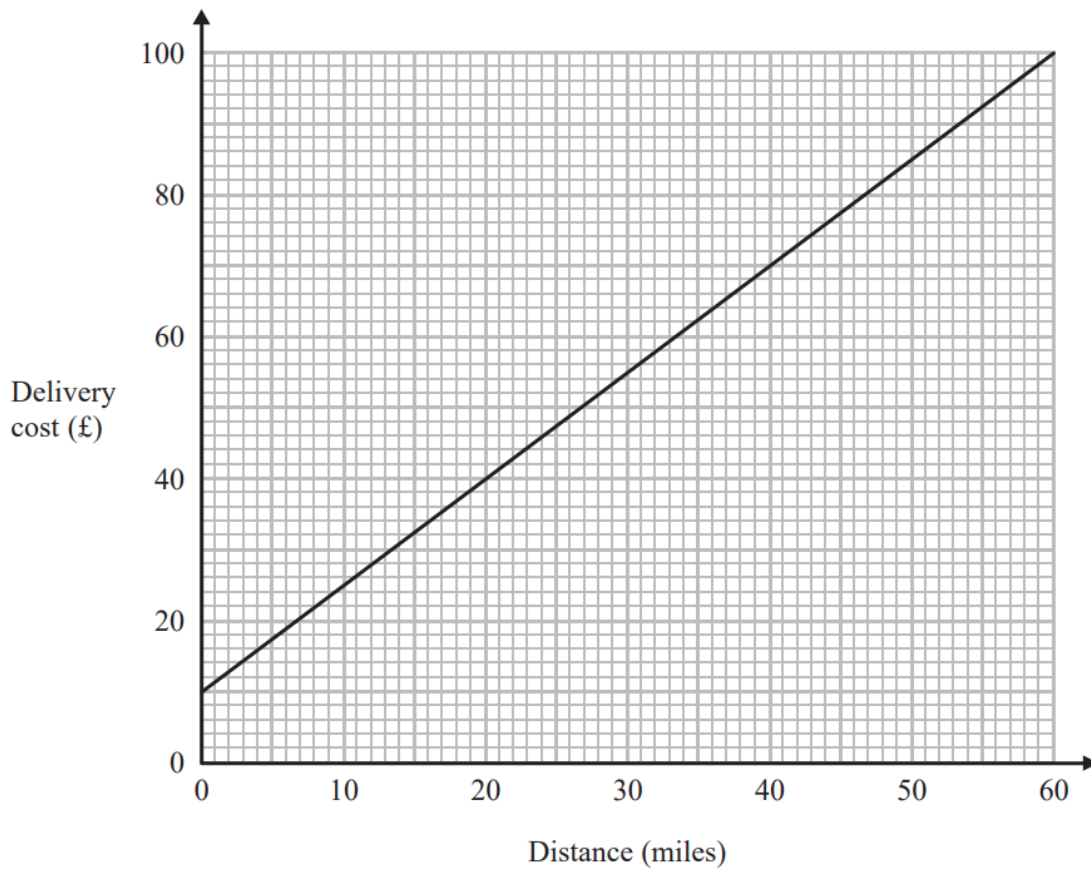
(3)

(Total for Question 11 is 4 marks)

11 You can use this graph to change between litres and gallons.
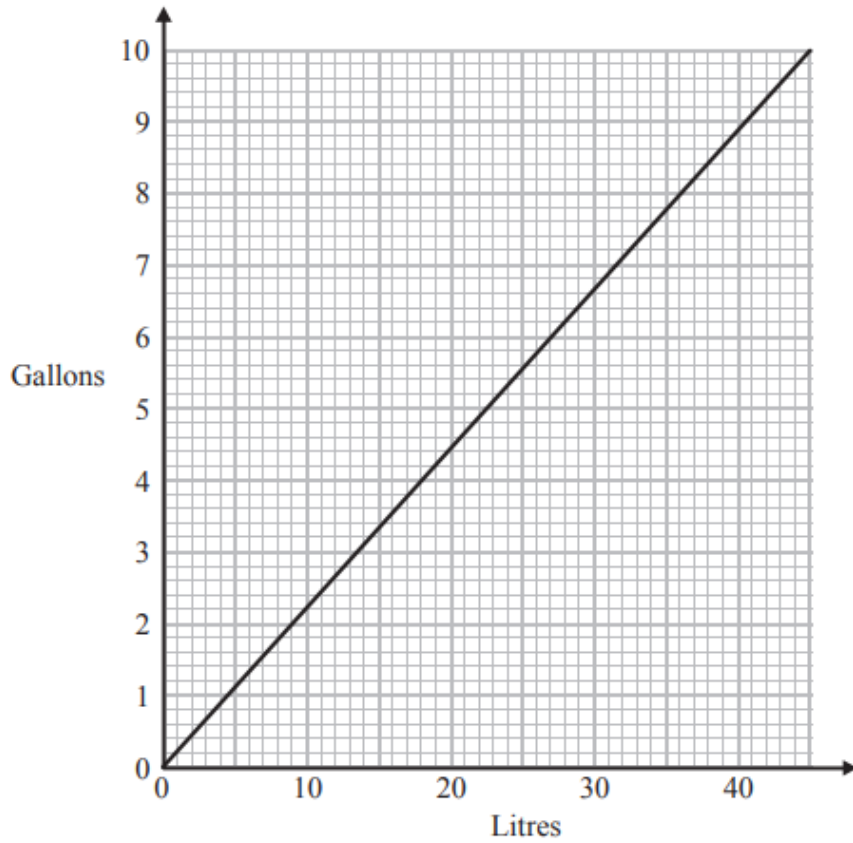
Which is the greater, 60 litres or 12 gallons?
You must show how you get your answer.

....

(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?

£ ....

(1)

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

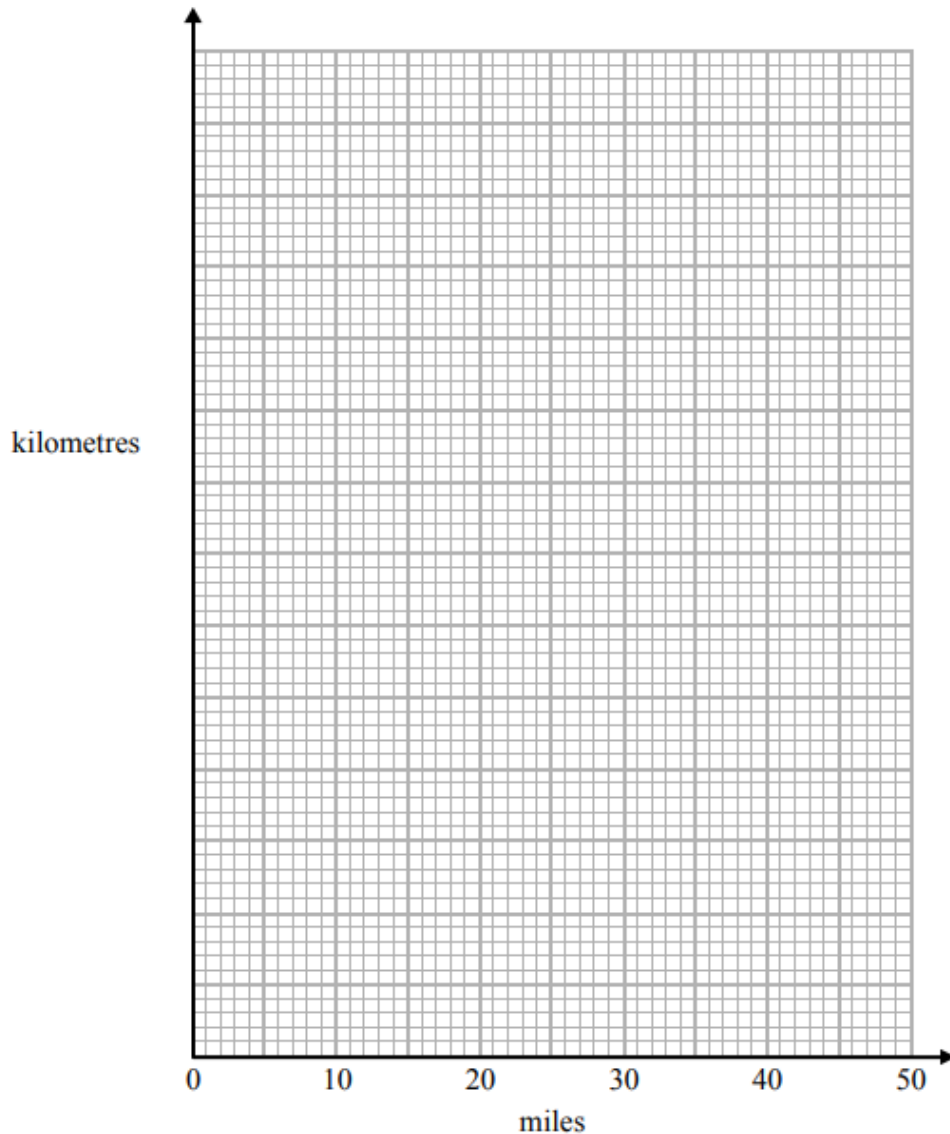(b) Work out the difference between the two delivery costs.

£ ....

(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.

kilometres

0   10   20   30   40   50

miles

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

(2)

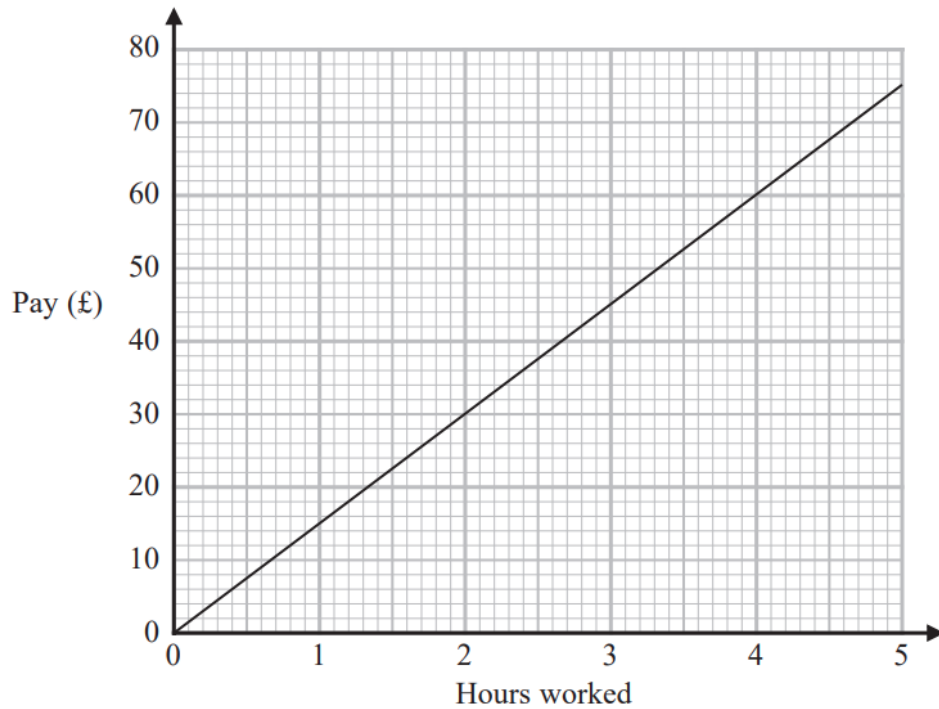**14** You can use this graph to change between ounces and grams.
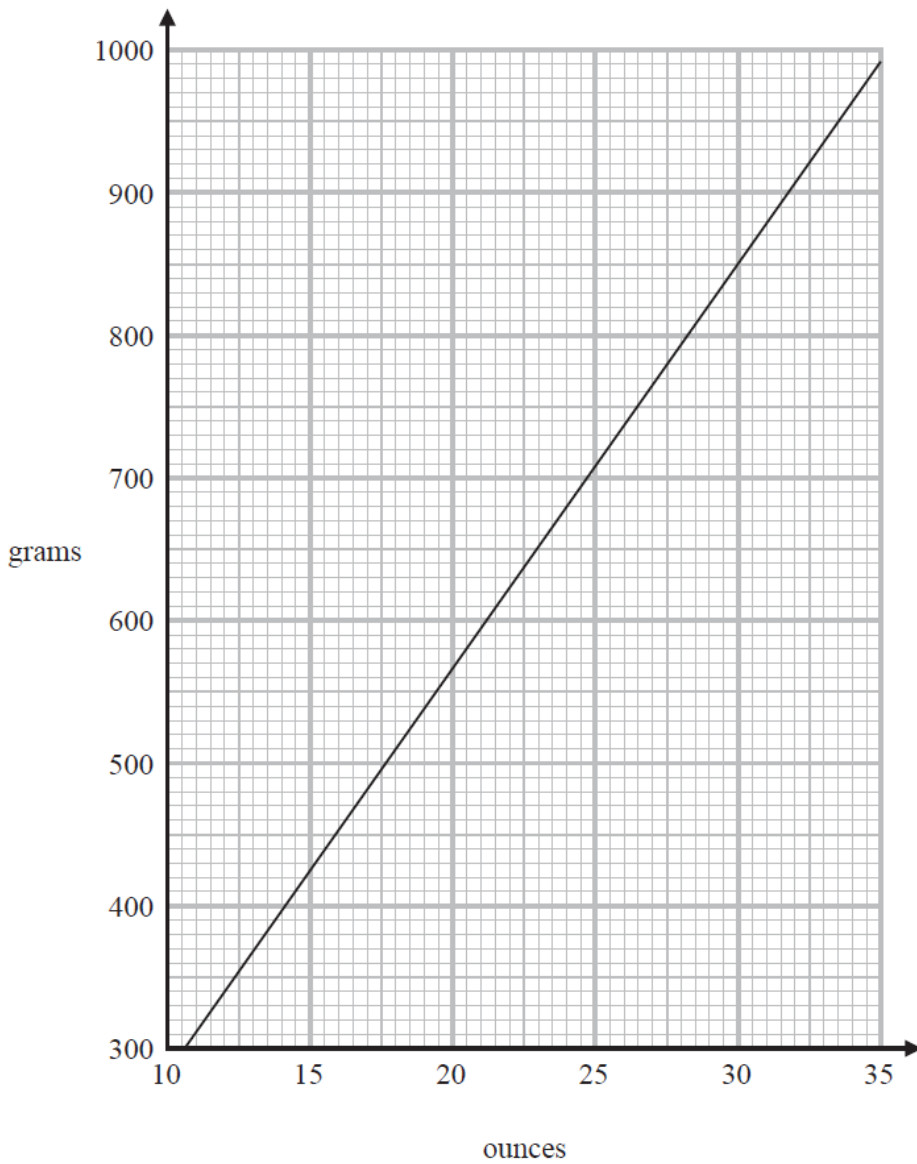
(a) Change 850 grams to ounces.

.... ounces

(1)

(b) Change 80 ounces to grams.

.... grams

(2)

(Total for Question 14 is 3 marks)

14 Nazima uses this graph to find out how much money she is paid for the number of hours she has worked.

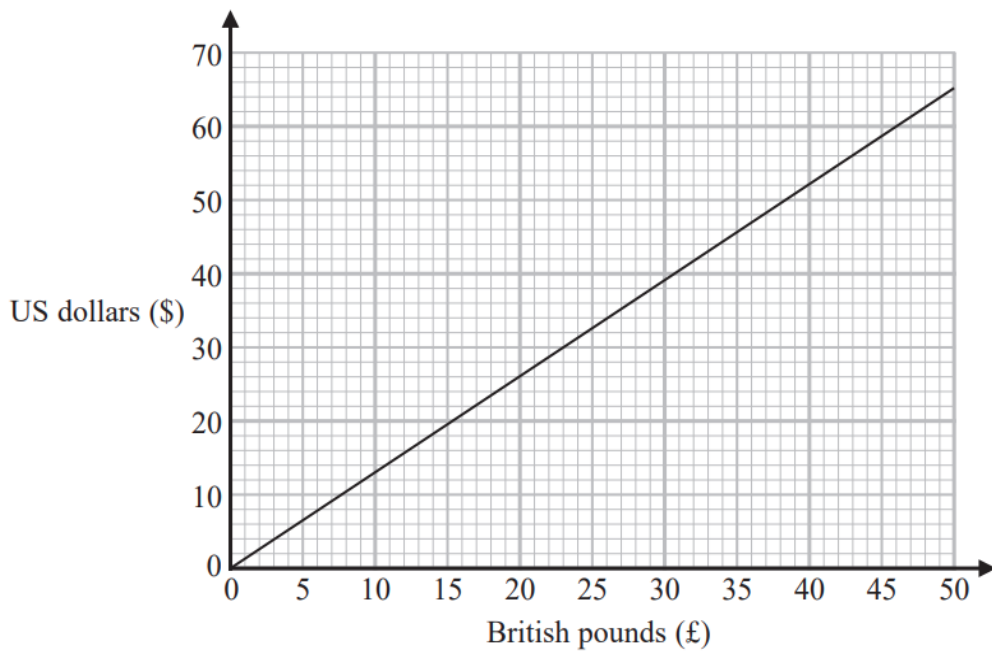
(a) How much money is Nazima paid for each hour she works?

£...

(1)

Last week Nazima worked for 36 hours.

(b) How much money was Nazima paid?

£...

(2)

(Total for Question 14 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.

£ ....

(Total for Question 18 is 3 marks)