THIS IS A LEGACY SPECIFICATION

OCR
RECOGNISING ACHIEVEMENT

M3

Monday 16 January 2012 – Morning

GCSE MATHEMATICS C (GRADUATED ASSESSMENT)

B273A MODULE M3 – SECTION A

B21645011 2

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Geometrical instruments
- Tracing paper (optional)

Duration: 30 minutes

B273A

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

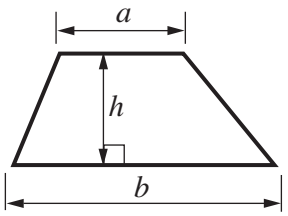
WARNING

No calculator can be used for Section A of this paper

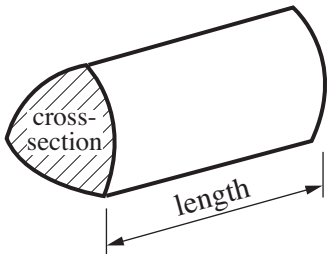
This paper has been pre modified for carrier language

Formulae Sheet

Area of trapezium = $\frac{1}{2}(a + b)h$



Volume of prism = (area of cross-section) × length



PLEASE DO NOT WRITE ON THIS PAGE

1 Barry sees this in a newspaper.

1 euro costs £0·85

(a) What will 100 euros cost?

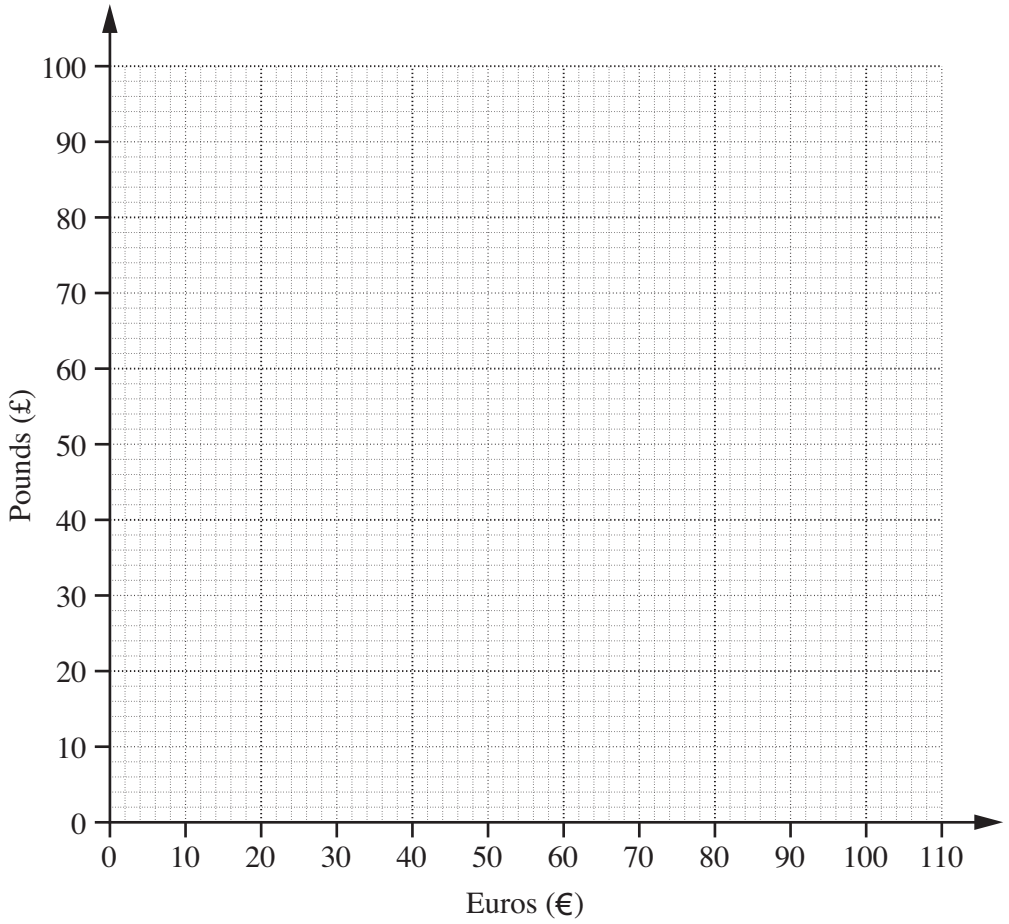
(a) £ ..... **[1]**

(b) Complete this table.

Euros (€)	0	10	50	100
Pounds (£)	0	8·50		

[1]

(c) Plot the values from the table and draw a graph to change between euros and pounds.



[2]

(d) Use your graph to change £70 into euros.

(d) € ..... **[1]**

2 Work out.

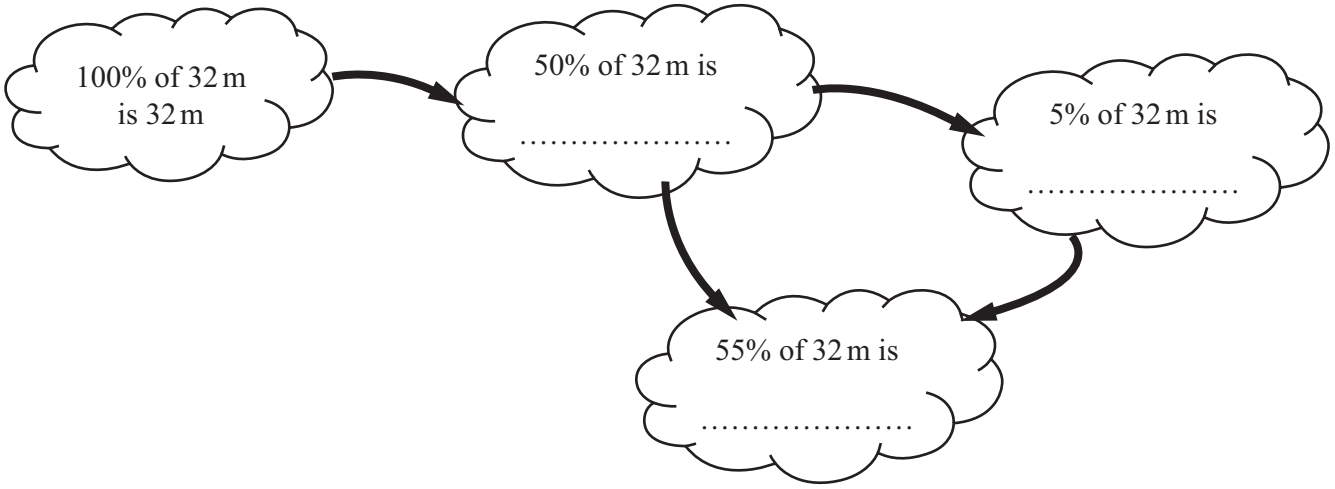
(a) $12{\cdot}8 \div 4$

(a) ..... **[1]**

(b) $4 + 2 \times 5$

(b) ..... **[1]**

3 Complete this percentage chain to work out 55% of 32 metres.



[3]

4 A recipe to cook beef gives this instruction.

Cook beef for 40 minutes per kilogram plus an extra 30 minutes.

(a) Carla has a piece of beef that weighs $2\frac{1}{2}$ kg.

How many minutes will it take for the beef to cook?

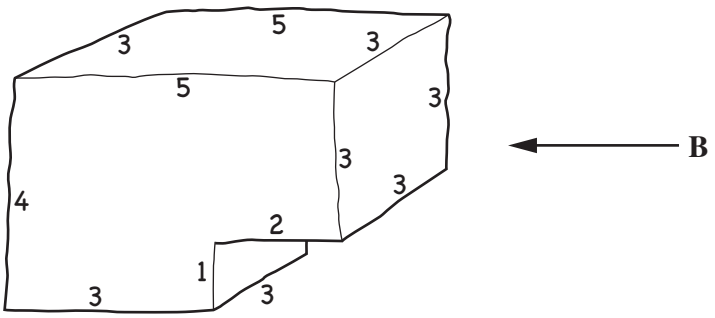
(a) ..... minutes **[2]**

(b) When Carla switches the oven on, it takes 5 minutes to reach the cooking temperature.
When the oven reaches the cooking temperature, Carla puts the beef into the oven.
When the beef is cooked, Carla must let it rest for 15 minutes before it is ready to eat.
She wants the beef to be ready to eat at 1 pm.

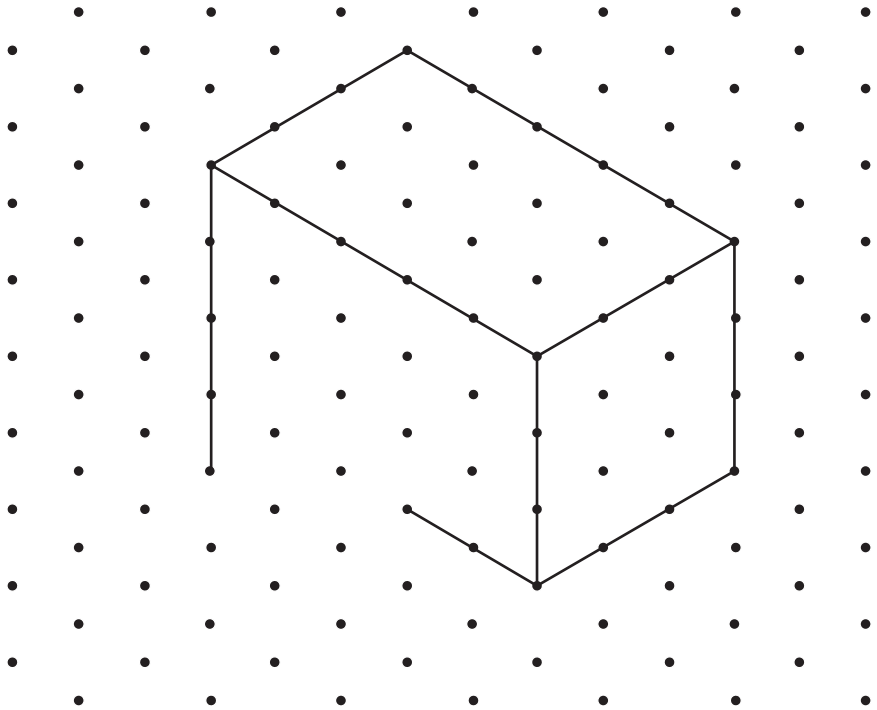
At what time should Carla switch on her oven?

(b) ..... **[3]**

5 Gina uses an ink cartridge for her printer.
This is a sketch of her ink cartridge.
All lengths are in cm.

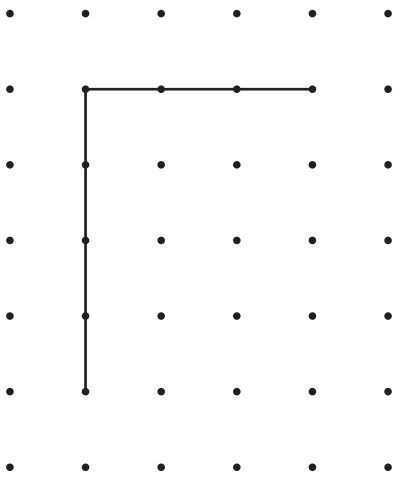


(a) She begins to draw her ink cartridge on isometric spotty paper.



Complete the isometric drawing of Gina's cartridge. **[1]**

(b) Complete this full-size side view of Gina's cartridge when seen from **B**.



[2]

(c) Gina buys a bottle that is filled with $\frac{1}{2}$ a litre of ink.

Gina's cartridge holds 20 ml of ink.
She fills her cartridge 15 times.

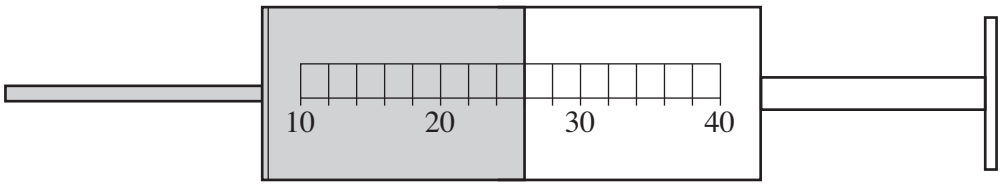
(i) How much ink does she use?

(c)(i) ..... ml **[2]**

(ii) After filling her cartridge 15 times, how much ink is left in the bottle?

(ii) ..... ml **[1]**

(d) Gina uses a syringe to fill her cartridge.
It has a scale showing millilitres.
She draws up some ink into her syringe.



How many millilitres of ink are in the syringe?

(d) ..... ml **[1]**

TURN OVER FOR QUESTION 6

6 Jack has two bags of marbles, A and B.
Bag A has 16 marbles in it. 8 of them are red.

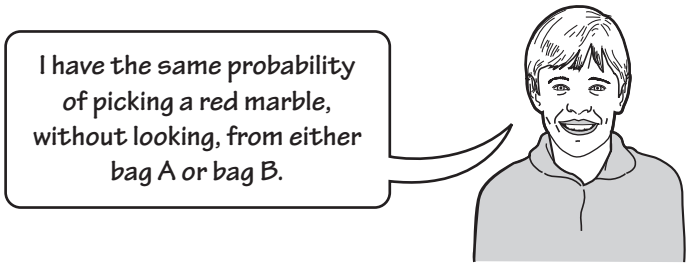
Jack picks a marble from bag A without looking.

(a) What is the probability that Jack picks a red marble?

(a) ..... **[1]**

(b) Bag B has 8 marbles in it. 4 of them are red.

Jack says:



Is Jack correct?
Explain your answer.

Jack is ..... because .....

.....

.....

..... **[2]**