

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M3 – SECTION A

B273A

Candidates answer on the question paper

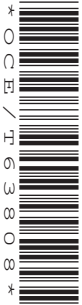
OCR Supplied Materials:
None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)

Tuesday 23 June 2009
Morning

Duration: 30 minutes



| | | | |
|--------------------|--|-------------------|--|
| Candidate Forename | | Candidate Surname | |
|--------------------|--|-------------------|--|

| | | | | | | | | | | | |
|---------------|--|--|--|--|--|--|------------------|--|--|--|--|
| Centre Number | | | | | | | Candidate Number | | | | |
|---------------|--|--|--|--|--|--|------------------|--|--|--|--|


INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that 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.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

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.

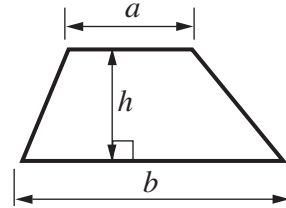
WARNING



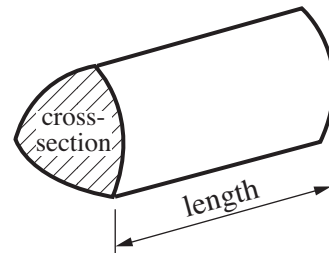
No calculator can be used for Section A of this paper

Formulae Sheet

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



$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$



PLEASE DO NOT WRITE ON THIS PAGE

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations, is given to all schools that receive assessment material and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1PB.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

1 Work out.

(a) 1.5×3

(a) [1]

(b) 2.75×10

(b) [1]

(c) $9.6 \div 4$

(c) [1]

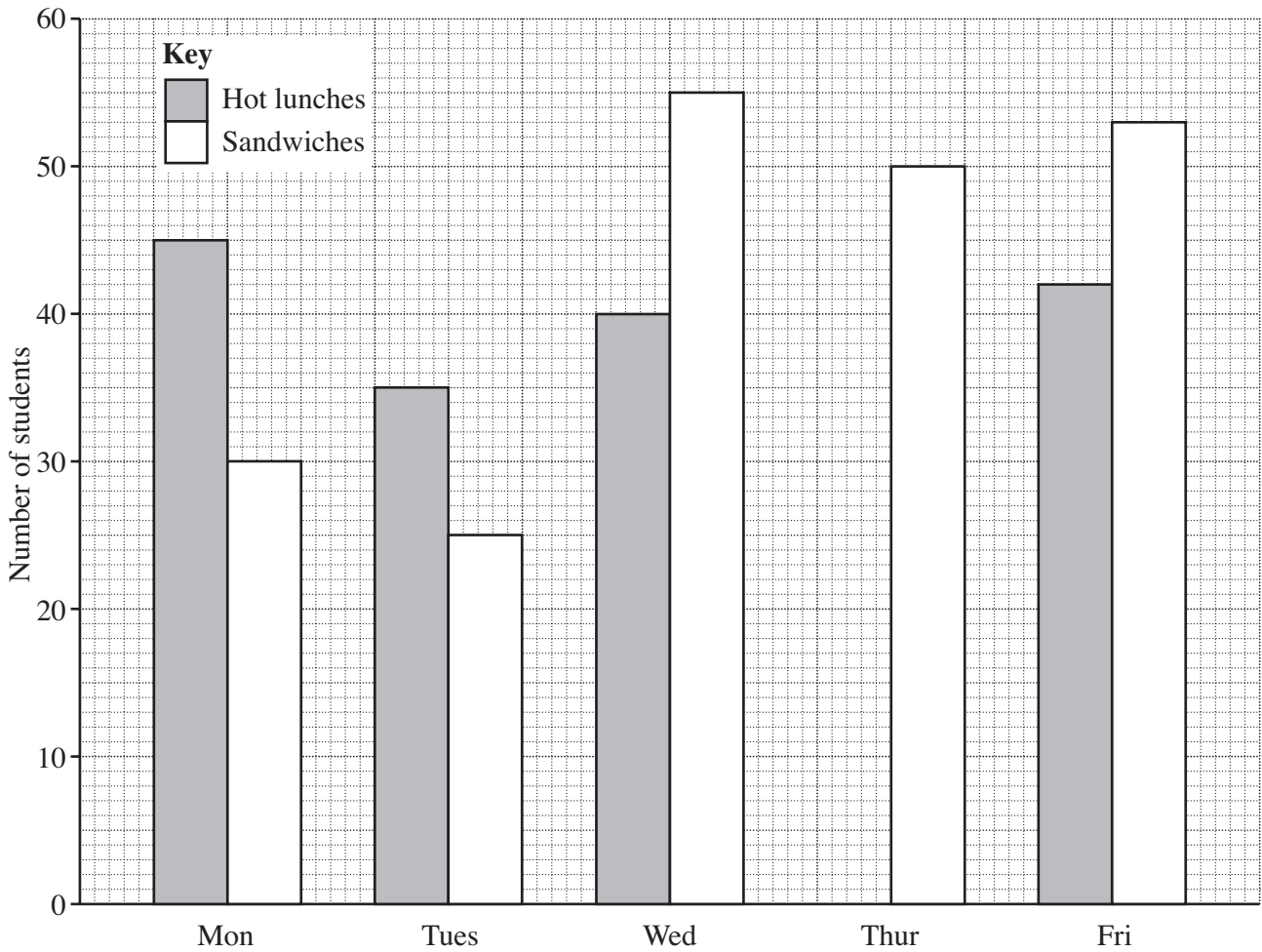
(d) $\frac{1}{5}$ of 40

(d) [1]

(e) $(7 + 8) \div (2 + 3)$

(e) [2]

2 This bar chart shows the numbers of students who ate hot lunches and ate sandwiches at a school on each of five days.



(a) (i) How many students ate a hot lunch on Wednesday?

(a)(i) [1]

(ii) On Friday, how many **more** students ate sandwiches than ate a hot lunch?

(ii) [1]

(iii) On Thursday, 25 students ate a hot lunch.

Show this on the bar chart.

[1]

(b) This list shows how much 5 students spent on their lunches.

£1.30 £2.90 £1.56 £2.39 £2.48

Work out the range of these amounts.

(b) £ [1]

(c) Mr Brown buys 100 sandwiches for a school trip.
The sandwiches cost £2.68 each.

Work out 100×2.68 .

(c) [1]

(d) Lunchtime starts at 12 45 and ends 50 minutes later.

(i) At what time does lunchtime end?

(d)(i) [1]

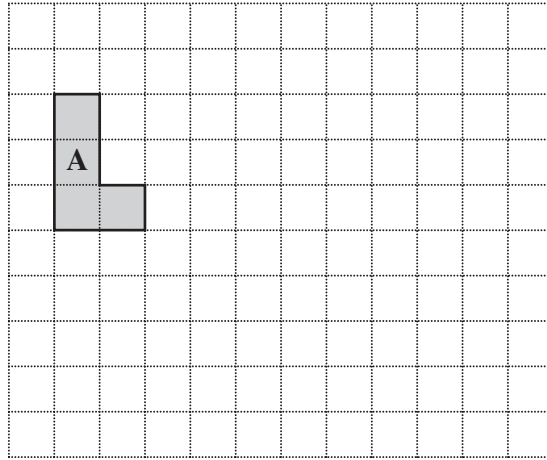
(ii) Tim and his friends play football at lunchtime.
They start playing at 12 55 and stop playing at 13 20.

For how long do they play football?

(ii) minutes [1]

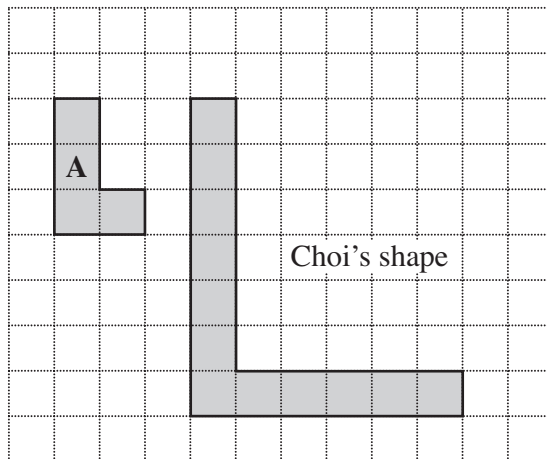
3 Shape A has been drawn on this grid.

(a) On the grid, draw an enlargement of shape A using scale factor 2.



[2]

(b) Choi has drawn an enlargement of shape A on this grid, using scale factor 3.




Her enlargement is wrong.

Write down two mistakes she has made.

1 [1]

2 [1]

- 4 Helen is going to the theatre.
She sees this poster.

| Theatre Tickets | |
|--------------------------------------|---|
| <i>Adult</i> — £50 |  |
| <i>Child</i> — £30 | |
| BUY ONLINE – 20% OFF THESE PRICES | |

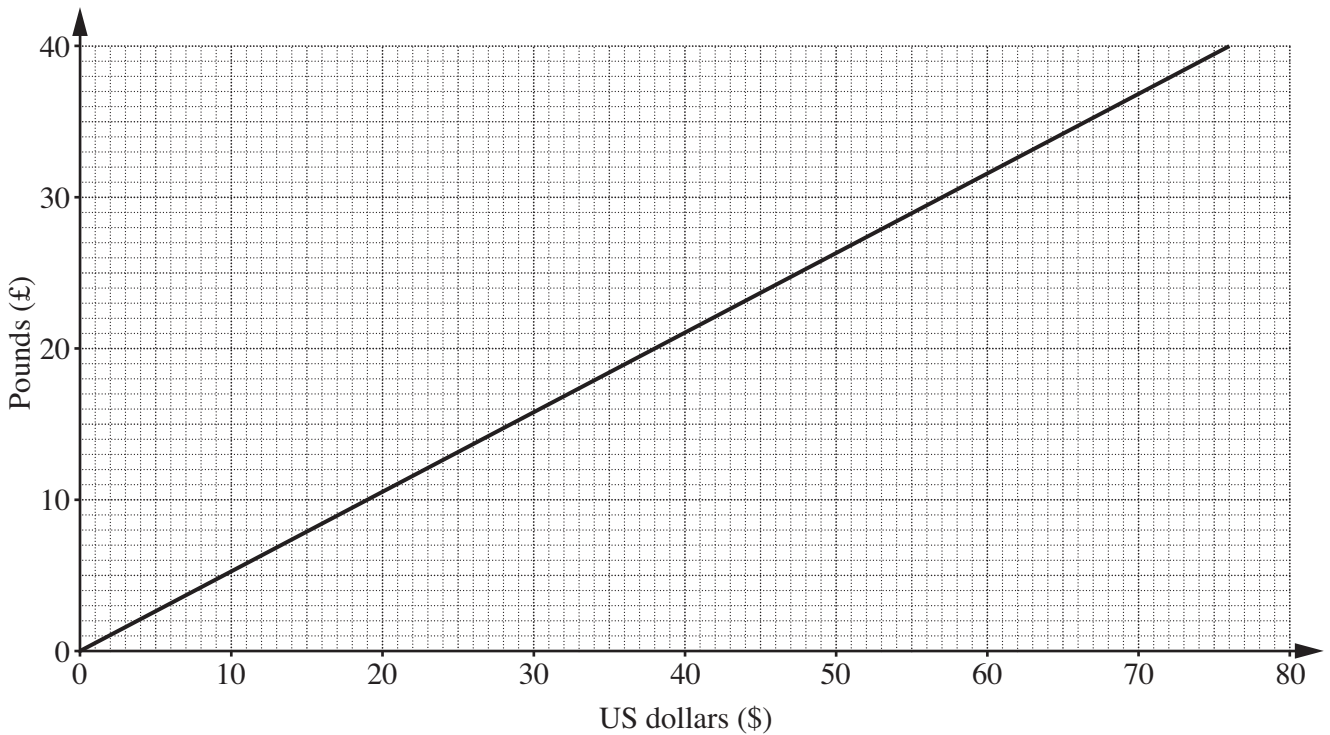
Helen buys 2 adult tickets and 1 child ticket online.

How much does she pay?
You must show your working.

£ [4]

TURN OVER FOR QUESTION 5

5 This is a graph for converting US dollars (\$) to pounds (£).



(a) Zahira changes £20 into dollars.

Use the graph to find how many dollars (\$) she receives for £20.

(a) \$ [1]

(b) Heidi is on holiday in the USA.

(i) She sees a bottle of perfume costing 65 dollars (\$65).

Use the conversion graph to find how much \$65 is in pounds.

(b)(i) £ [1]

(ii) Heidi also sees some trainers.
She knows they cost £60 in the UK.

How much is £60 in dollars (\$)?
Explain how you could use the graph to work this out.

Cost \$ because
..... [2]