



# M3

**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 21 June 2011**  
**Afternoon**

**Duration: 30 minutes**



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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### MODIFIED LANGUAGE

#### 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. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- 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).
- 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.

#### INFORMATION FOR CANDIDATES

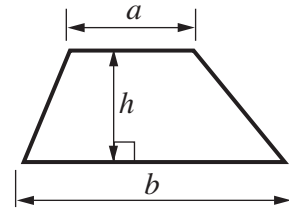
- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **12** pages. Any blank pages are indicated.

**WARNING**

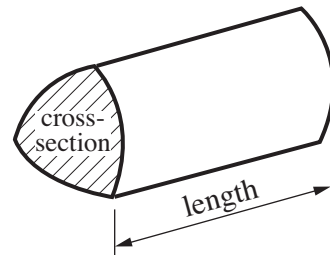
No calculator can be used for Section A of this paper

## Formulae Sheet

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

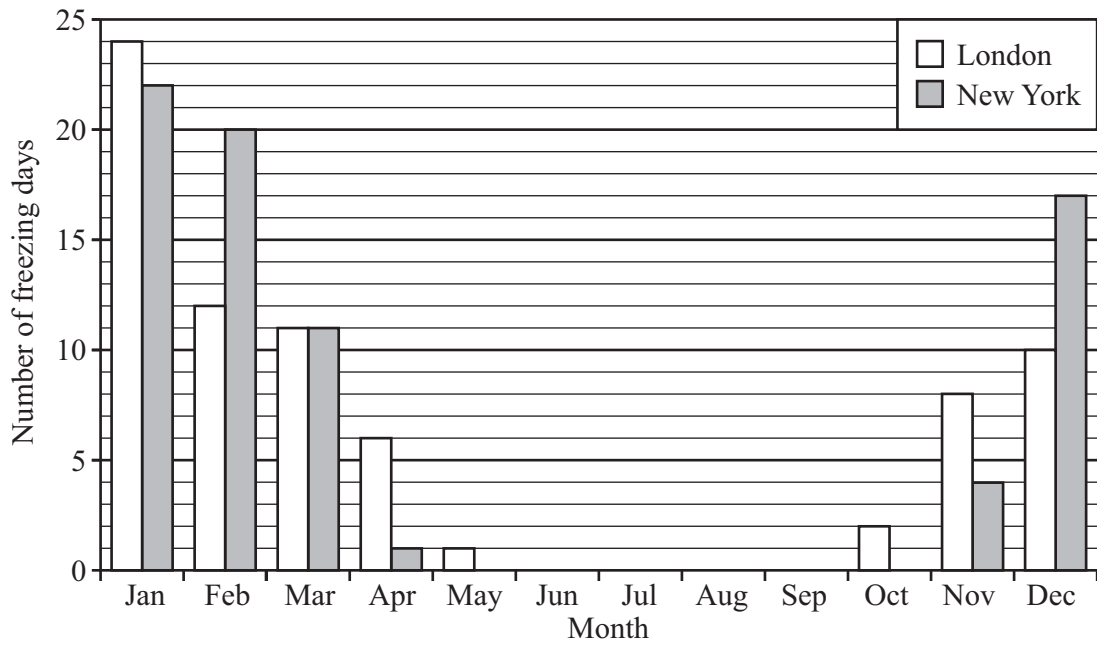


**Volume of prism** = (area of cross-section)  $\times$  length



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1 This chart shows the number of days in each month when it was freezing in London and in New York.



Use the chart to answer these questions.

(a) For how many days in January was it freezing in London?

(a) ..... [1]

(b) In which months did New York have more freezing days than London?

..... [1]

(c) In which months did London have **no** freezing days?

..... [1]

2 Connor is a keen skateboarder.

- (a) He wants to buy a skateboard.  
He finds this on a website.



- (i) How much money does Connor save by buying now?

(a)(i) £ ..... [2]

- (ii) Connor also sees this special oil for skateboard wheels.



At this price, how much would a litre of *Swift Oil* cost?

(ii) £ ..... [3]

- (b) Connor's skateboard arrives.  
He wants to go to a skateboard park, but the park rules are

You MUST wear pads and helmet.

- (i) Connor buys a set of pads and a helmet.



Skateboard Helmet  
**Price: £29.95**  
(free postage)

[Click to buy now](#)



Set of Skateboard Pads  
**Price: £12.45**  
(free postage)

[Click to buy now](#)

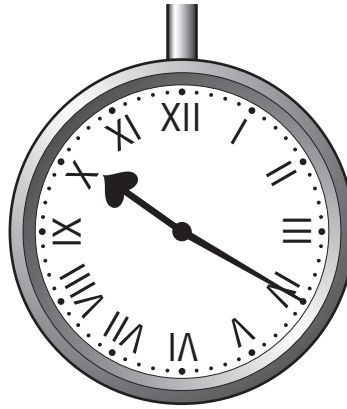
His sister pays half of the total cost of these.

How much does she pay?

(b)(i) £ ..... [3]

- (ii) Connor travels to the skateboard park by train.  
Trains leave at 15 minutes before and 15 minutes after each hour.

He arrives at the station at this time.

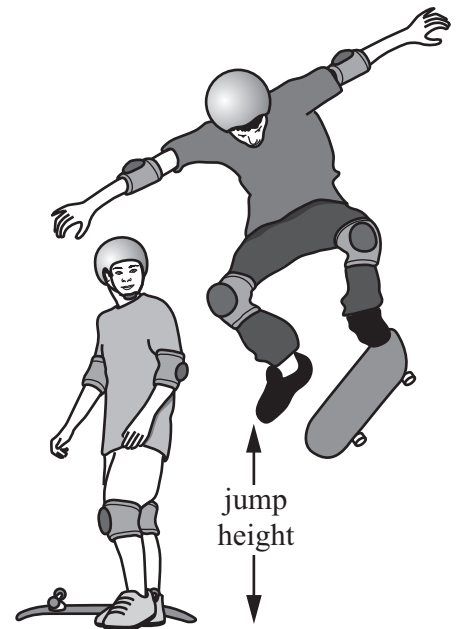


How long does he have to wait for the next train?

(ii) ..... minutes [2]

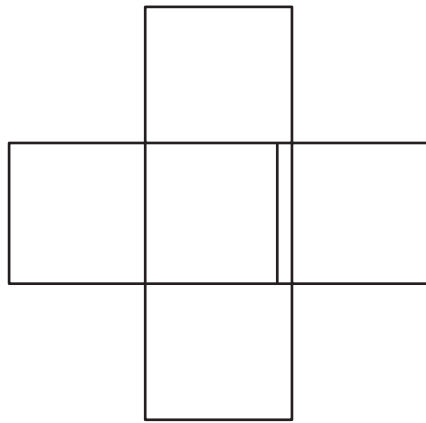
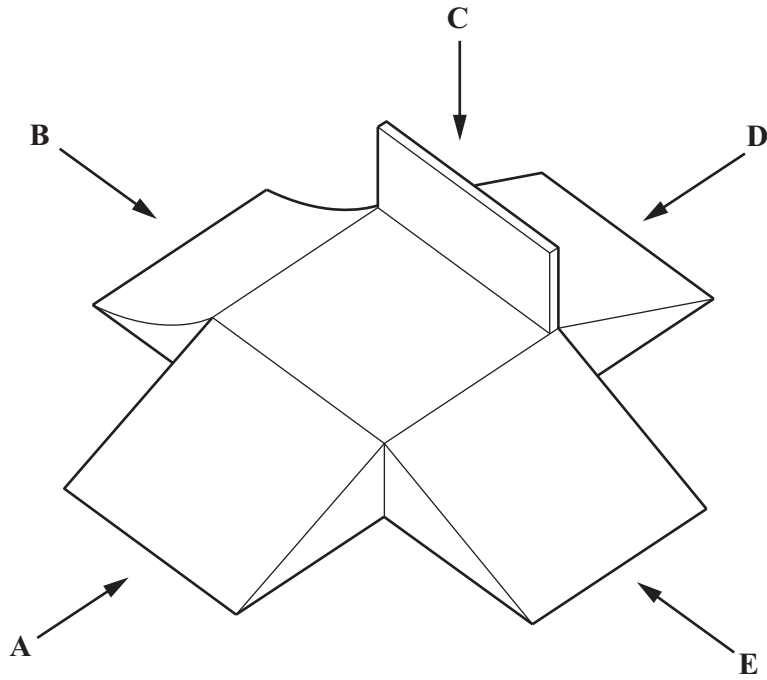
- (c) The picture shows Connor making a skateboard jump at the skateboard park.

Estimate the jump height.  
Give the units of your answer.

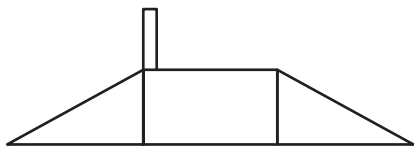


(c) ..... [2]

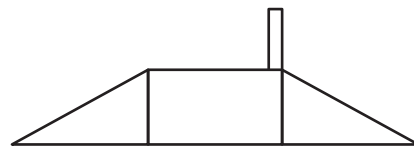
(d) This is a drawing of a skateboard ramp in the skateboard park.  
Match each view with the correct letter.



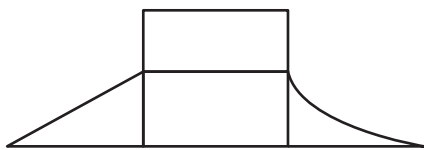
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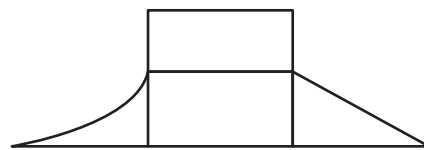
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- (e) Connor and his friend make a long skateboard.  
They find a scale plan in a magazine.



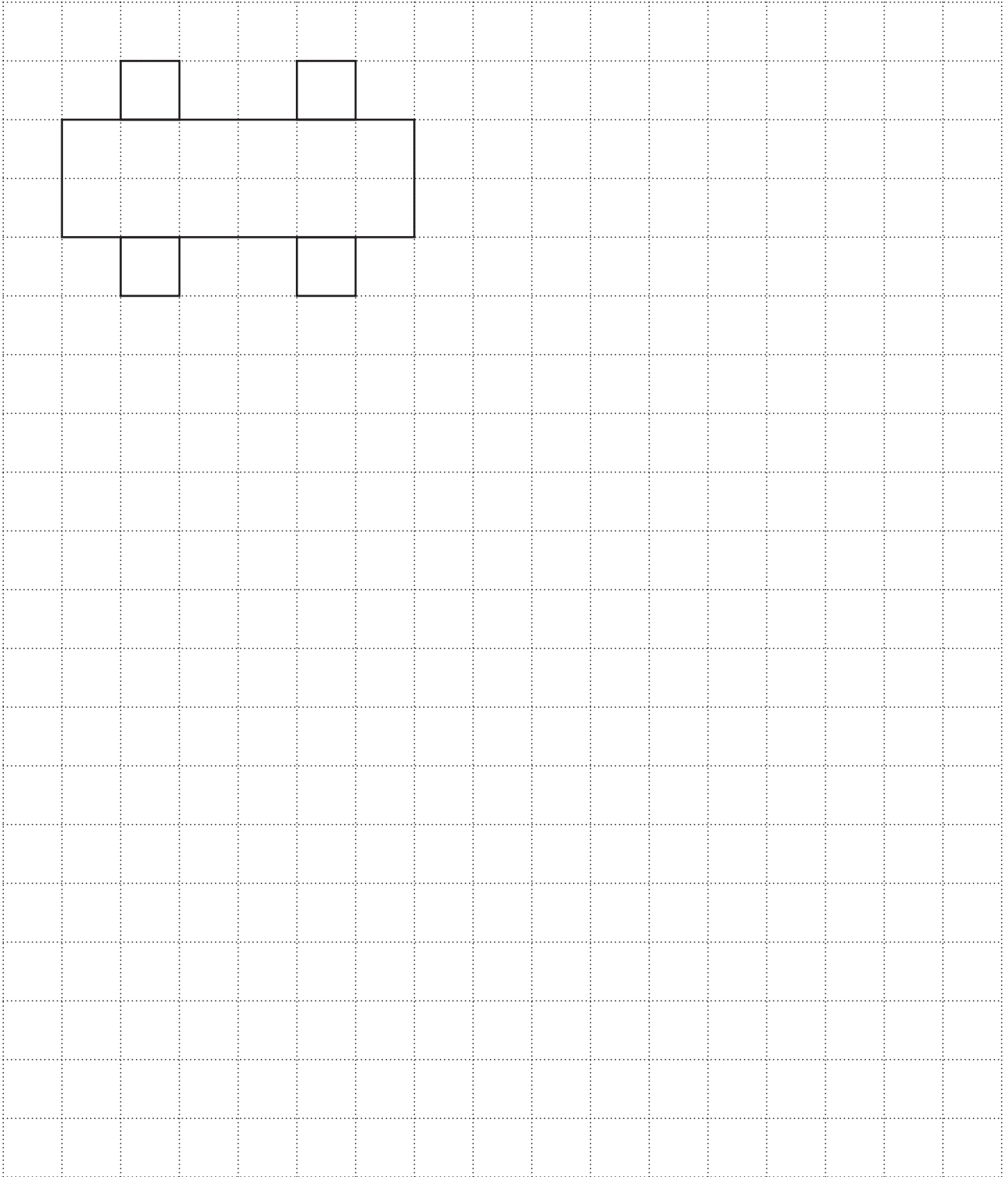
Scale: 1 mm represents 1 cm

What is the actual length of the long skateboard when they have made it?

(e) ..... cm [2]



- (f) On the grid draw an enlargement of this skateboard club logo.  
Use a scale factor of 2.

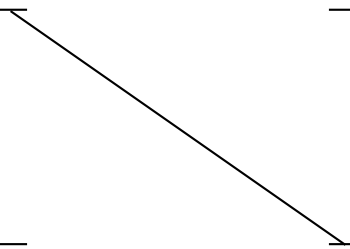


[3]

**TURN OVER FOR QUESTION 3**

- 3 Match each calculation with its answer.  
One has been done for you.

$0.5 \times 4$	$0.2$
$0.6 \div 3$	$2.0$
$5 \times 4$	$200$
$0.2 \times 1000$	$20$



[2]

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