

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

B273A

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M3 (SECTION A)

TUESDAY 21 JUNE 2011: Afternoon

DURATION: 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Geometrical instruments

Tracing paper (optional)

WARNING

**No calculator can be used for
Section A of this paper.**

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

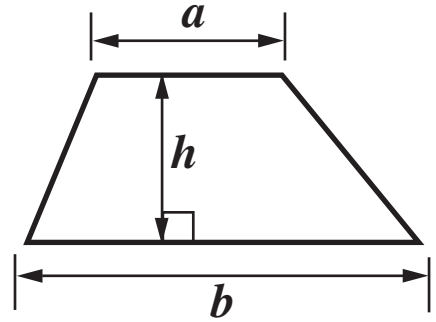
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **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.**

INFORMATION FOR CANDIDATES

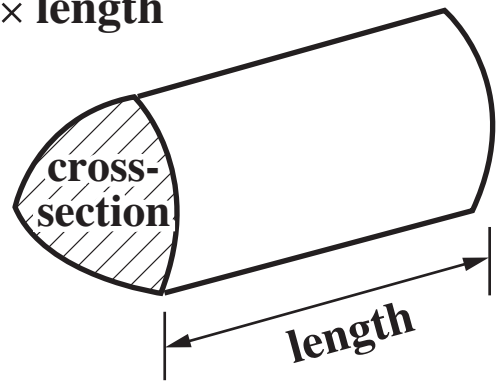
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

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

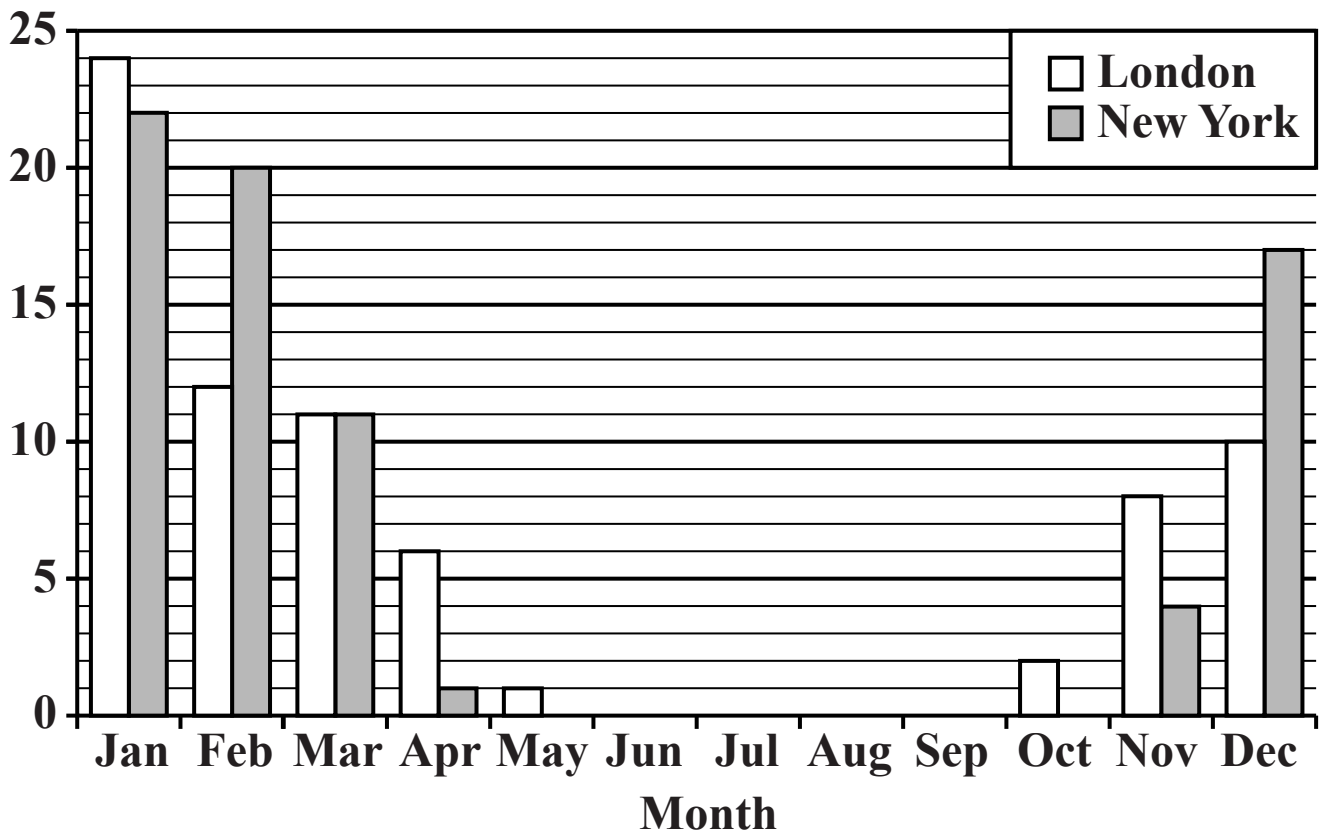


Volume of prism = (area of cross-section) \times length



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

Number of freezing days



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 one for £50 on the internet. There is a 20% reduction if he buys now.

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

(a)(i) £ _____ [2]

(ii) Connor also finds a special oil for skateboard wheels. It costs £3.00 for 10 ml.

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 state

You MUST wear pads and helmet.

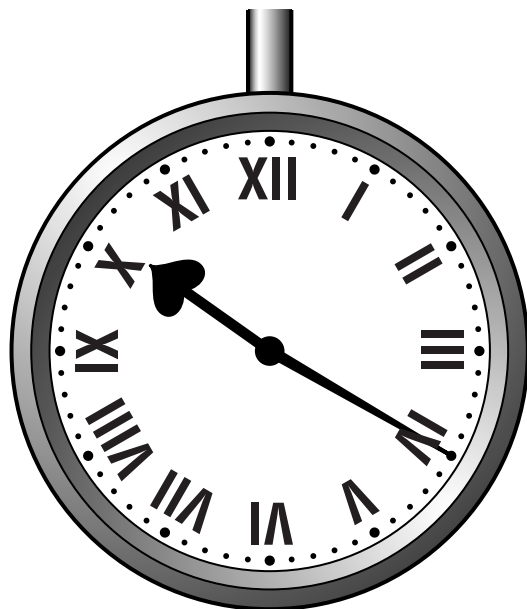
(i) Connor buys a set of pads for £12.45 and a helmet for £29.95.

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.

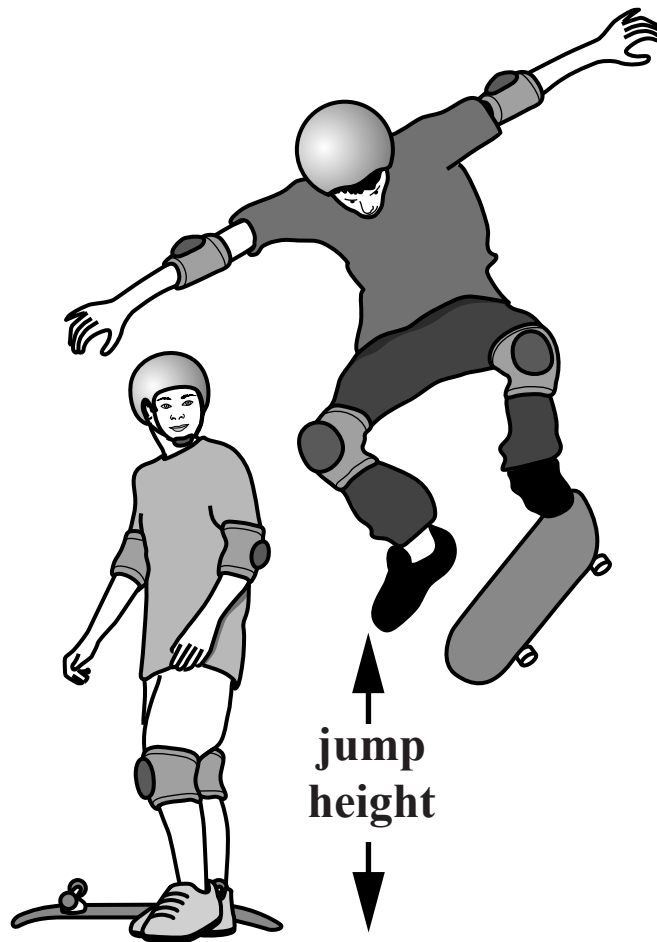
He arrives at the station at this time.



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

(ii) _____ minutes [2]

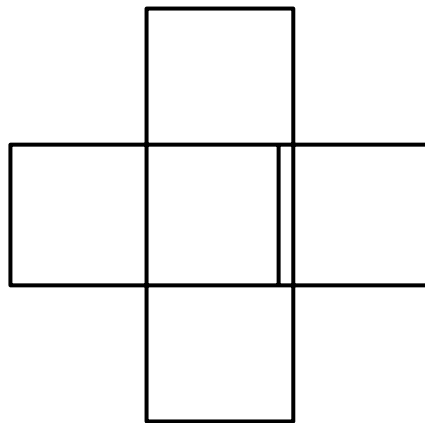
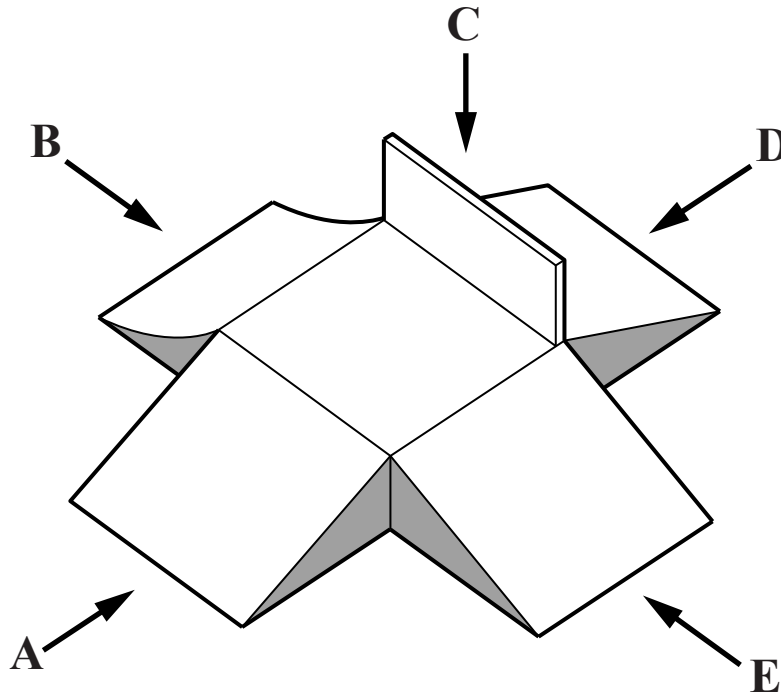
(c) The picture shows Connor making a skateboard jump at the skateboard park.



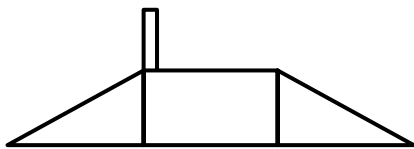
Estimate the jump height.
Give the units of your answer.

(c) _____ [2]

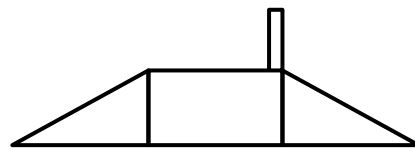
(d) This is a drawing of a skateboard ramp in the skateboard park.
 Match each view with the correct letter.



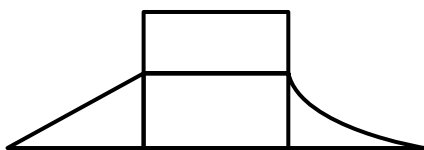
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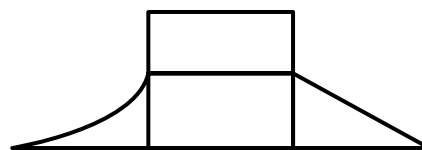
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- (e) Connor and his friend make a long skateboard.
They find a scale plan in a magazine.

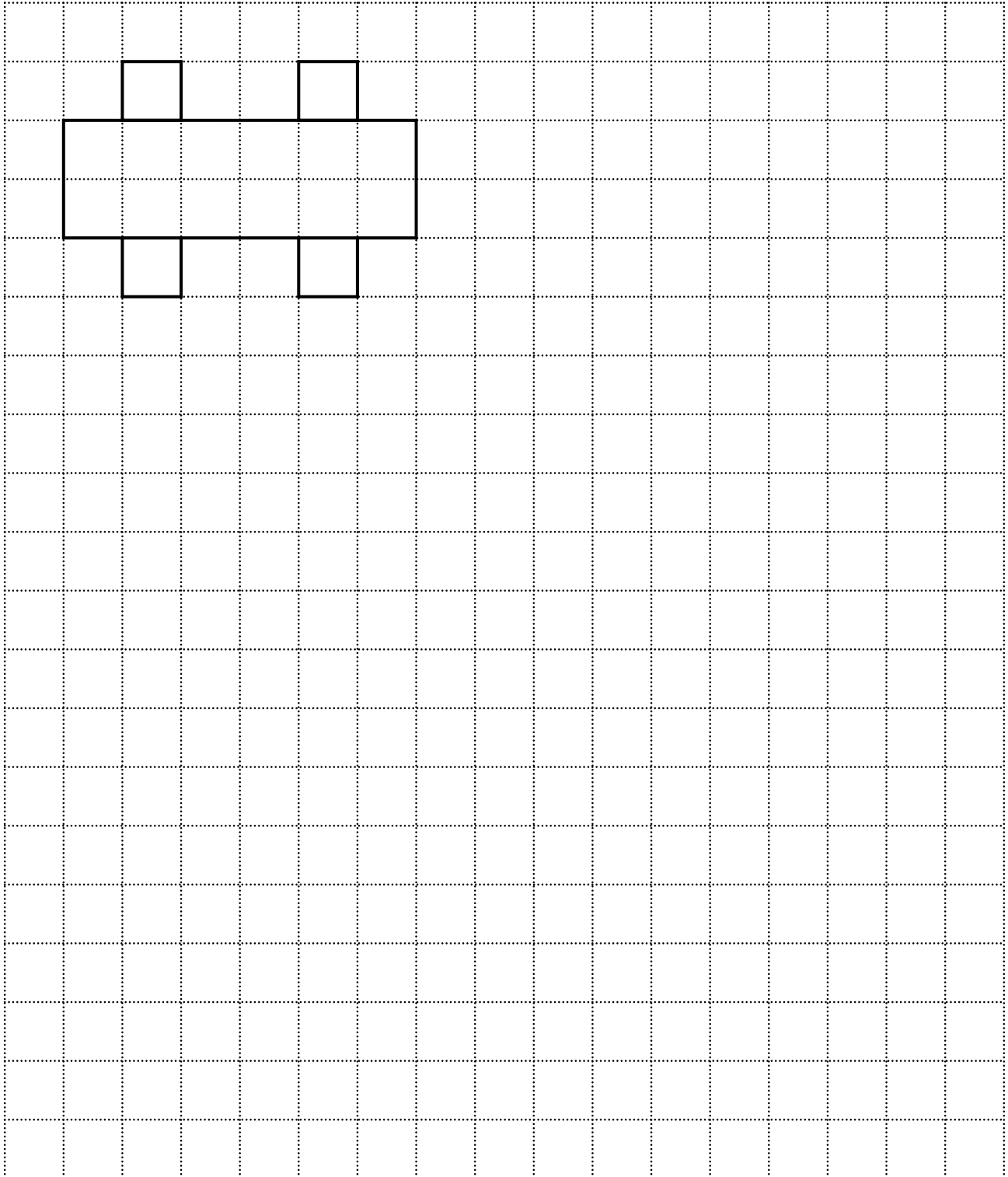


SCALE: 1 mm REPRESENTS 1 cm

What is the length of the real long skateboard?

(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.**

$$0.5 \times 4$$

$$0.2$$

$$0.6 \div 3$$

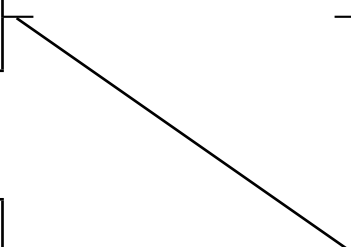
$$2.0$$

$$5 \times 4$$

$$200$$

$$0.2 \times 1000$$

$$20$$



[2]



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