

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**

B274B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M4 (SECTION B)

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)

Electronic calculator

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

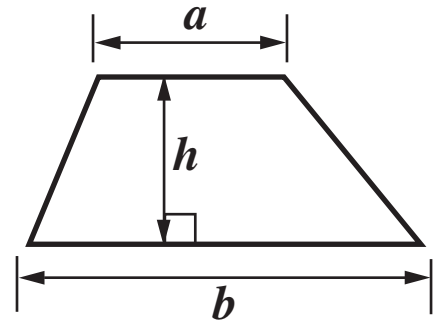
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

INFORMATION FOR CANDIDATES

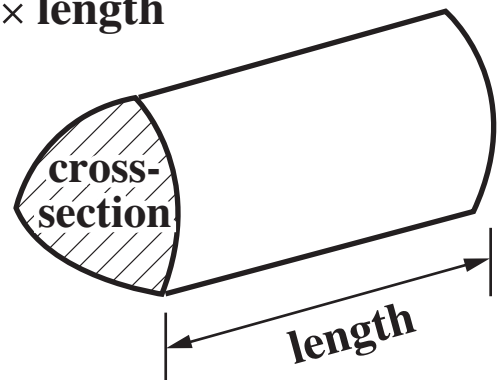
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 8.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

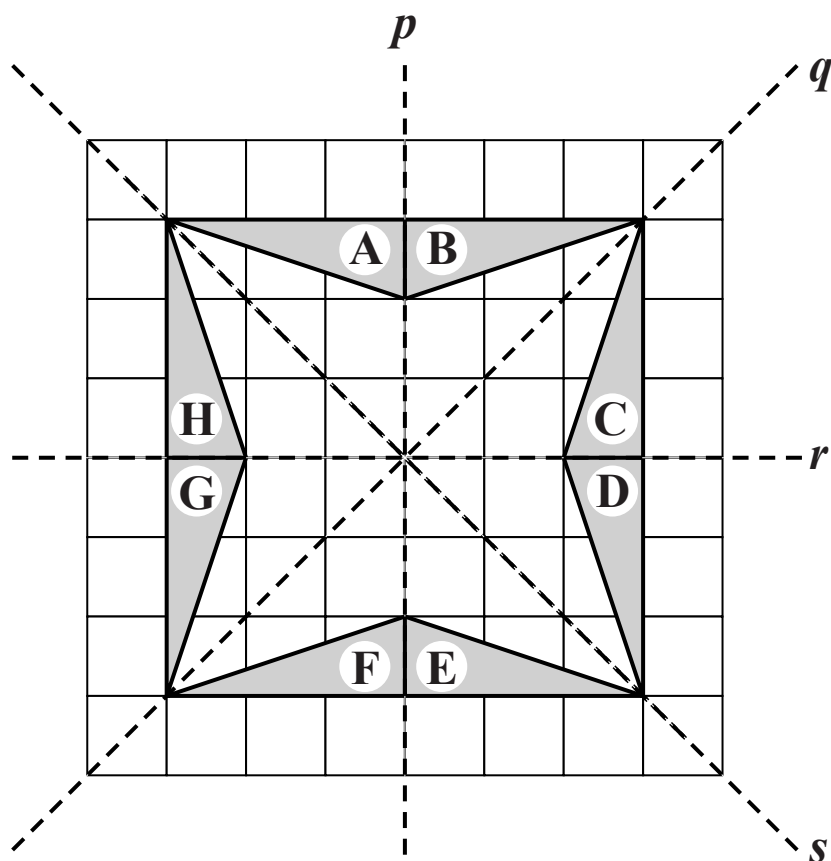
Area of trapezium = $\frac{1}{2} (a + b)h$



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



- 8 (a) Here is a pattern with four lines of symmetry, p , q , r and s .



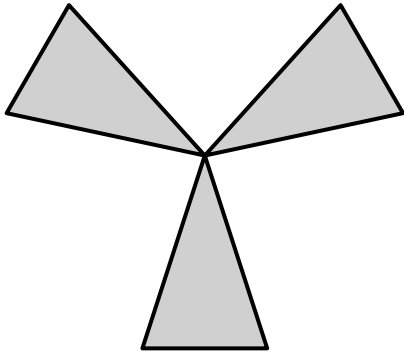
Complete each sentence with the correct letter.

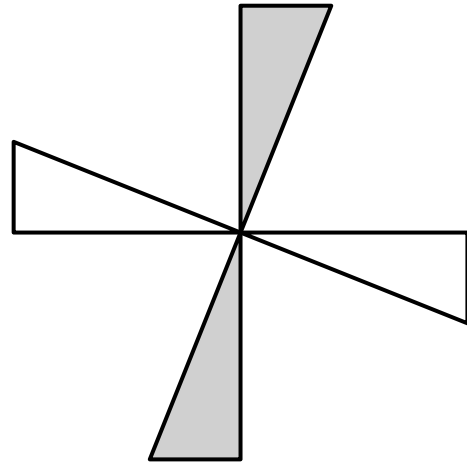
Triangle F is a reflection of triangle A in line _____ .

Triangle B is a reflection of triangle C in line _____ .

Triangle D is a reflection of triangle _____ in line p . [3]

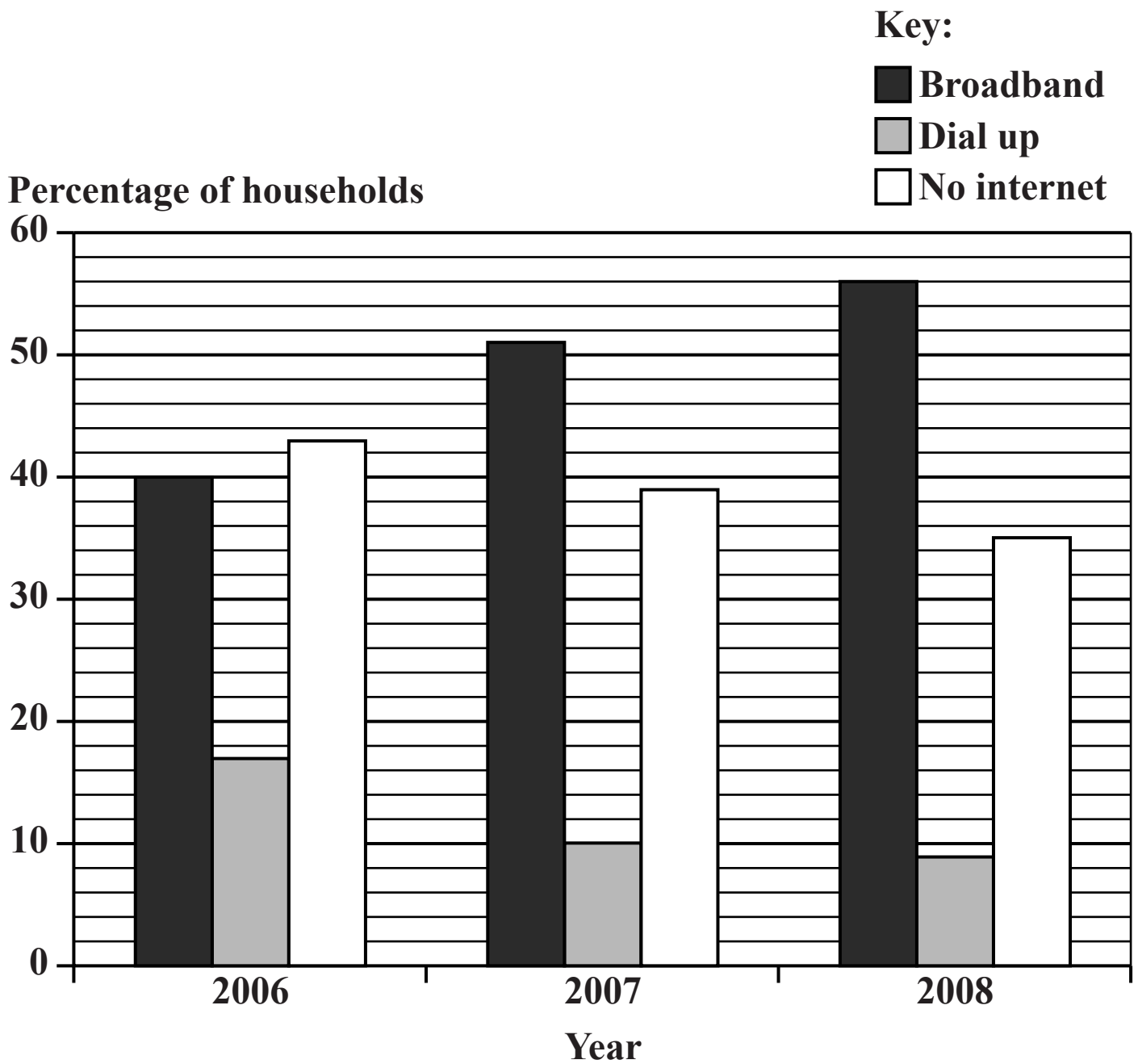
(b) Write down the order of rotation symmetry for each of these patterns.





[2]

9 (a) This graph shows the percentages of households in the UK with internet access from 2006 to 2008.



(i) Use the graph to complete these sentences.

In 2006 _____% of households had dial up internet.

From 2007 to 2008 the percentage of households with broadband went up by _____% .

[2]

(ii) Use the graph to describe one change in internet access in the UK from 2006 to 2008.

_____ **[1]**

- (b) Daunish asked his friends to record the amount of time they spent using the internet one Monday.**

Here are the times, in minutes.

32 48 17 25 85 5 25 31 27 35

- (i) Find the mean time.**

(b)(i) _____ minutes [3]

- (ii) Daunish also asked his friends to record how long they spent using the internet on a Saturday.**

How do you think the mean time for Saturday might be different from Monday?

Explain your answer.

_____ [1]

10 Eva is making cookies to sell for charity.

(a) Here are the ingredients for 20 Peanut Cookies.

Peanut Cookies – Makes 20	
50 g	butter
50 g	unsalted peanuts
50 g	brown sugar
75 g	peanut butter
150 g	wholemeal flour
1	egg
1 teaspoon	baking powder

Eva makes 100 Peanut Cookies.

Complete this list to show the ingredients for 100 Peanut Cookies.

Peanut Cookies – Makes 100	
_____ g	butter
_____ g	unsalted peanuts
_____ g	brown sugar
_____ g	peanut butter
_____ g	wholemeal flour
_____	eggs
_____ teaspoons	baking powder

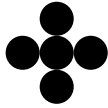
[3]

**(b) The ingredients for 100 cookies cost Eva £6·80.
She also spent £2·35 on packaging.
She sold the cookies for 75p for a bag of 4 cookies.
Eva sold all the bags of cookies.**

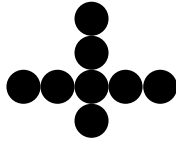
Work out how much profit Eva made.

(b) £ _____ [4]

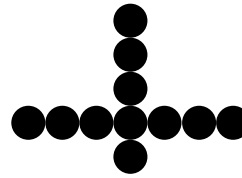
11 These patterns are made from counters.



Pattern 1



Pattern 2



Pattern 3

(a) This table shows the number of counters used in each pattern.

Complete the table.

Pattern	1	2	3	4	5
Number of counters	5	8	11		

[1]

(b) How many counters are used in Pattern 25?
Explain how you worked out your answer.

_____ because _____

_____ [2]

TURN OVER FOR QUESTION 12

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