

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**

B271B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M1 – 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

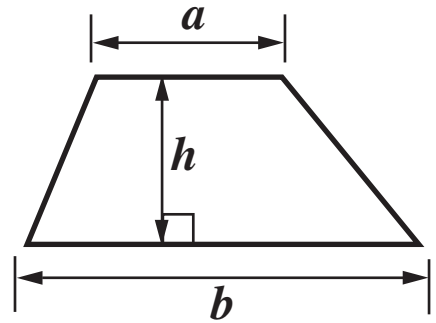
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

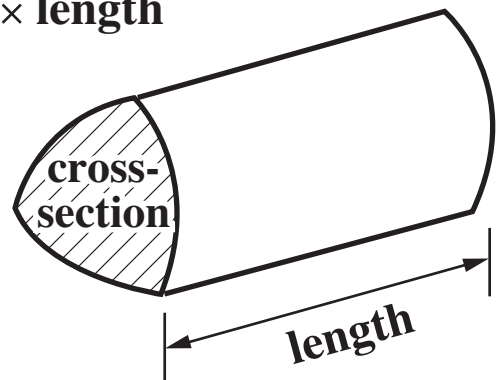
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 8.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

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



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



**8 Danny puts sunflower seeds and peanuts in his garden for the birds to eat.
These graphs show how many of each of three different types of birds visited the foods.**

(a) Danny saw 7 Sparrows visiting the peanuts.

Show this on the chart. [1]

(b) Which type of food did the Chaffinches prefer?

(b) _____ [1]

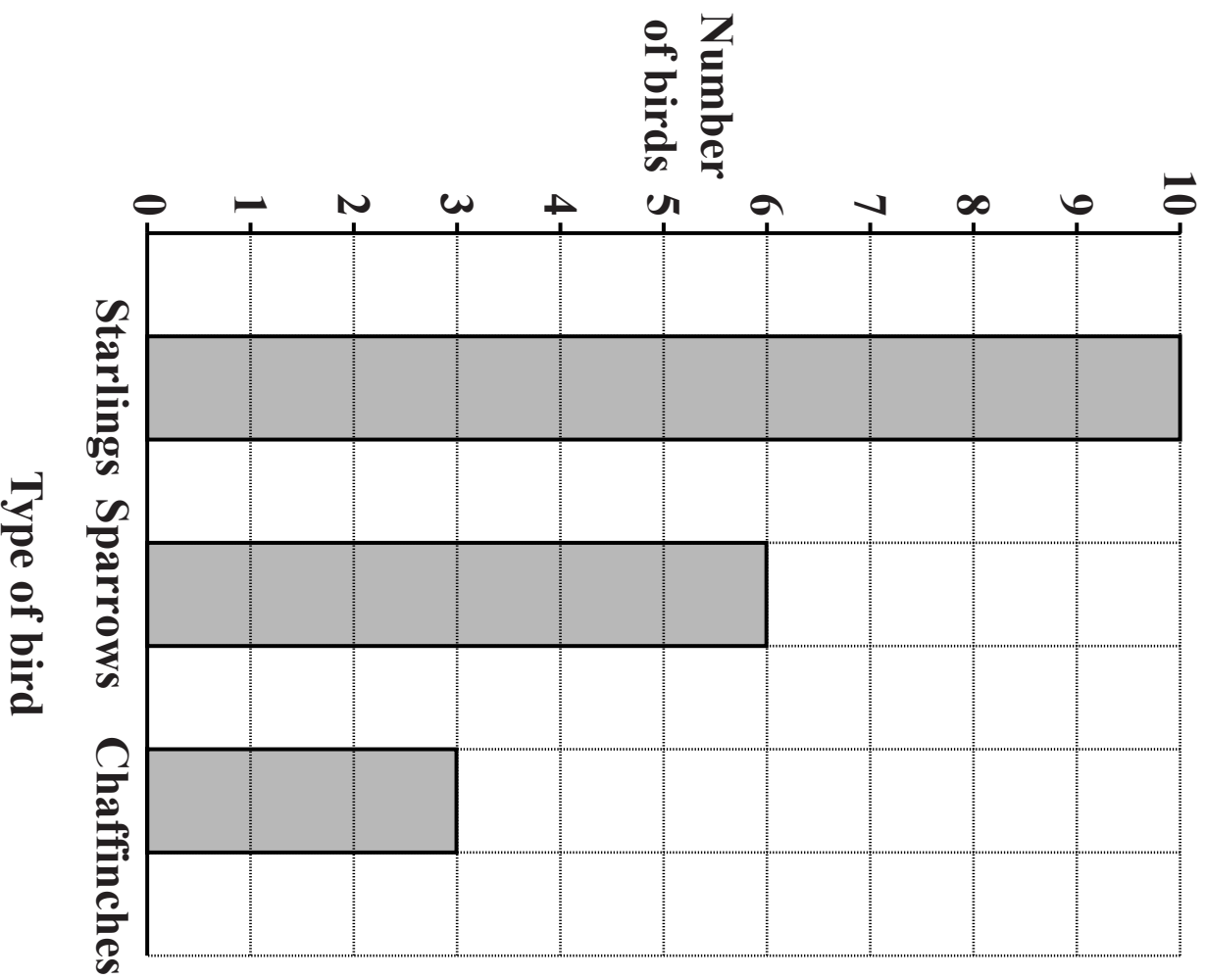
(c) How many Starlings visited the sunflower seeds?

(c) _____ [1]

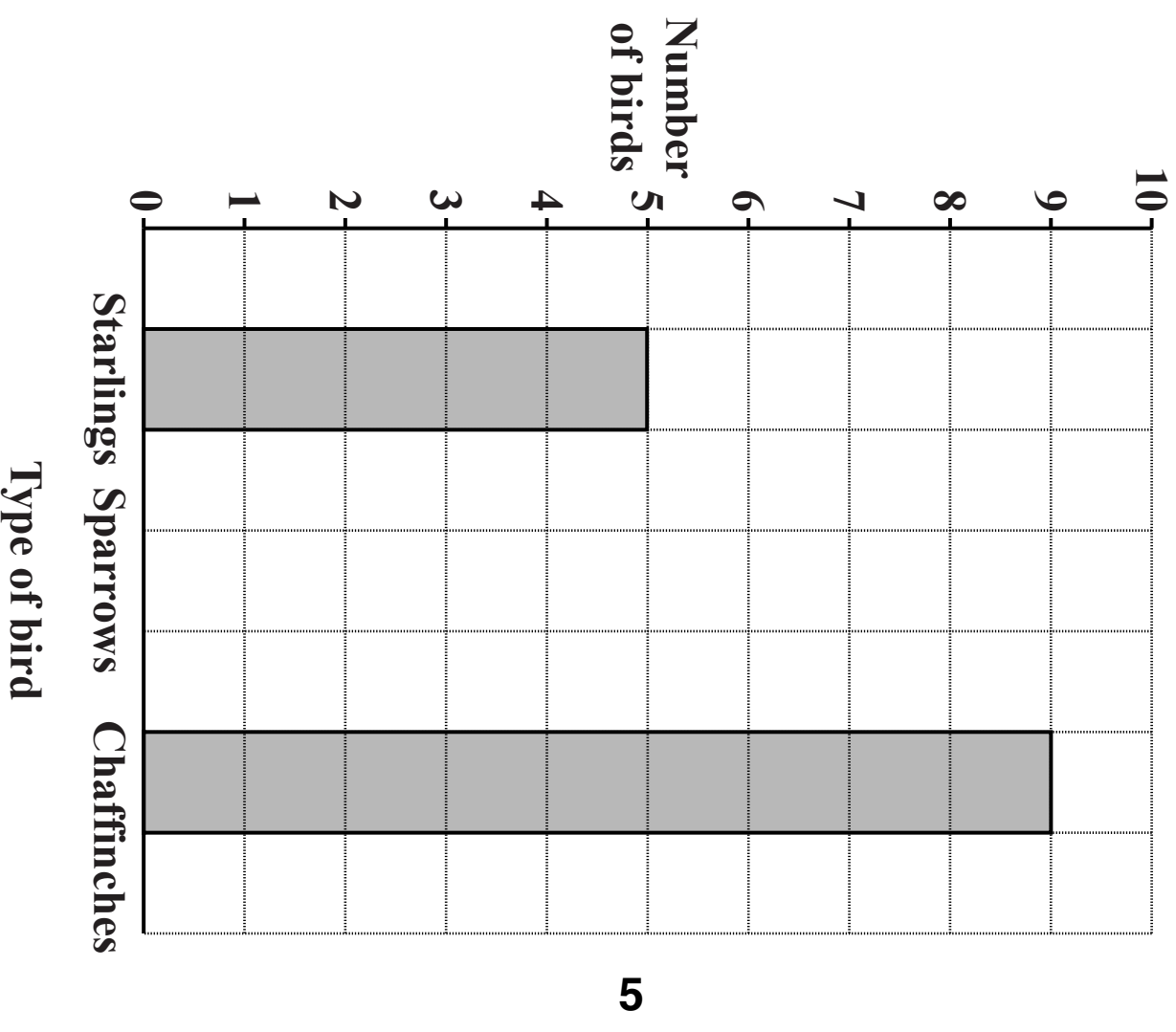
**(d) Which type of food was more popular?
Show how you decide.**

_____ because _____
_____ [2]

SUNFLOWER SEEDS



PEANUTS



- 9 (a) Transport for London records information about items left on trains and buses.
Here are the numbers of some of the items.

Mobile phones	Keys	Spectacles	Cameras and jewellery	Pairs of gloves
3 727	7 903	5 885	8 008	3 272

Put these numbers in order, starting with the highest.

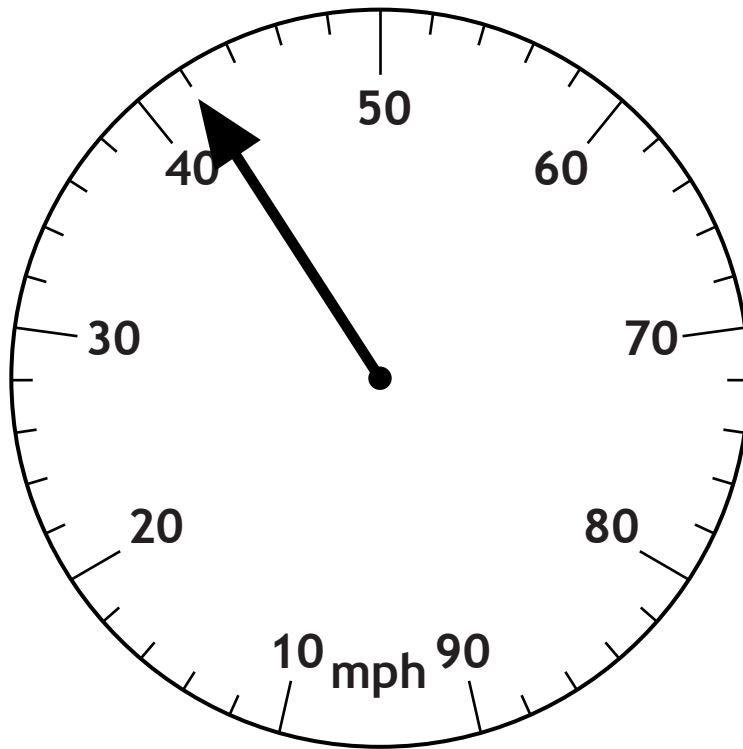
_____ [2]
highest

- (b) 7 903 keys were left.

Write 7 903 in words.

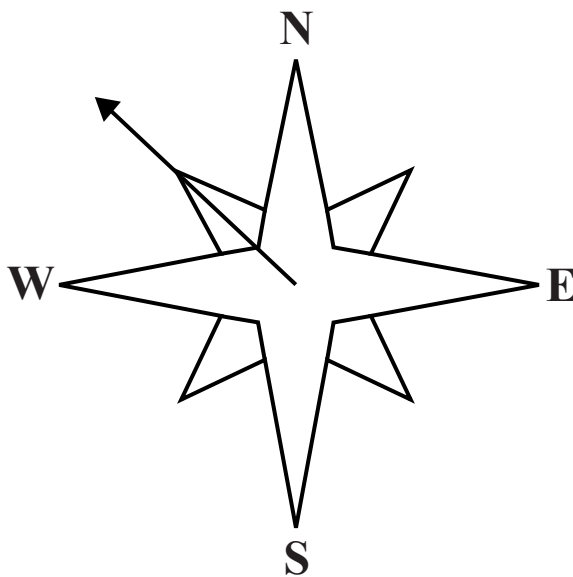
_____ [1]

10 (a) What speed in miles per hour (mph) is shown on this speedometer?



(a) _____ mph [1]

(b) What compass direction is shown by the arrow?



(b) _____ [1]

11 This is a group of three bricks.



The group has one white and two grey bricks.

(a) Paul joins two of these groups together, end-to-end.



How many grey bricks does Paul use?

(a) _____ [1]

(b) Quincy joins five groups of bricks together.

(i) How many grey bricks does he use?

(b)(i) _____ [1]

(ii) How many white bricks does he use?

(ii) _____ [1]

(c) Rita joins 50 groups of bricks together.

Explain how to work out how many grey bricks she uses.

_____ **[1]**

12 Alan and Cora are trying to choose names for their baby daughter.

They want to use all of the three names Elena, Hattie and Bella.

They are not sure what order to put the three names in.

Complete the table showing all the possible orders.

The first one has been done for you.

Elena	Hattie	Bella

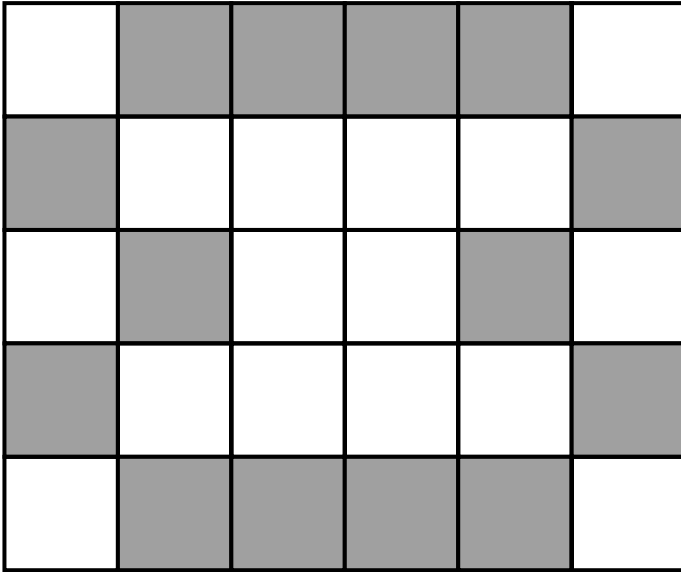
*You may not
need all
the rows.*

[2]

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TURN OVER FOR QUESTION 13

- 13** Anya decides to tile the kitchen wall behind her work surface.
She makes this pattern using grey tiles and white tiles.



- (a)** How many grey tiles are there in this pattern?

(a) _____ **[1]**

(b) Each tile has an area of 100 cm^2 .

What is the total area of the grey tiles used in this pattern?

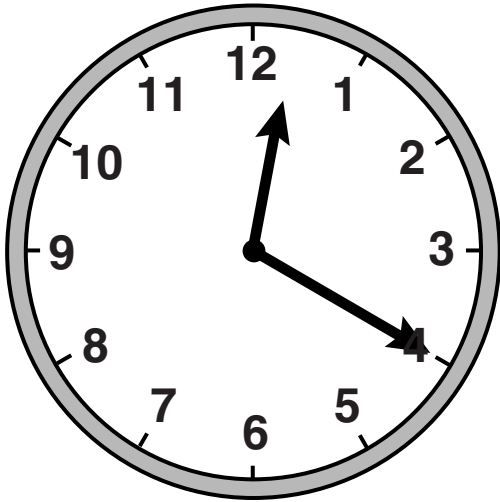
(b) _____ cm^2 [2]

**(c) She needs six of these patterns to tile her wall.
Grey tiles are sold in boxes of 12.**

How many boxes of grey tiles will she need?

(c) _____ [3]

14 Peter arrives at Kingston station at this time.



His train leaves at 1245.

(a) How long does Peter wait at Kingston station?

(a) _____ minutes [2]

(b) The train journey to Shepperton lasts 25 minutes.

What time does the train arrive at Shepperton?

(b) _____ [1]

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