OCR
RECOGNISING ACHIEVEMENT

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

General Certificate of Secondary Education

MATHEMATICS C (Graduated Assessment) 1966/2341B

FOUNDATION TERMINAL PAPER – SECTION B

Tuesday **7 JUNE 2005** Afternoon 1 hour

Candidates answer on the question paper.
Additional materials:
Geometrical instruments
Pie chart scale (optional)
Tracing paper (optional)
Scientific calculator

Candidate Name	Centre Number	Candidate Number

TIME 1 hour

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers, in blue or black ink, on the dotted lines unless the question says otherwise.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- There is a space after most questions. Use it to do your working. In many questions marks will be given for a correct method even if the answer is incorrect.

INFORMATION FOR CANDIDATES

- You are expected to use a calculator in Section B of this paper.
- 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 50.
- Section B starts with question 9.
- Use the π button on your calculator or take π to be 3·142 unless the question says otherwise.

FOR EXAMINER'S USE	
Section B	

This question paper consists of 11 printed pages and 1 blank page.

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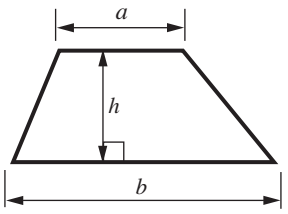
Formula Sheet: Foundation Tier

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



9 **(a)** Here is a number pattern.

51 47 43 39 35 .....

(i) Fill in the next number in this pattern. [1]

(ii) Explain how you worked it out.

.....[1]

(b) Here is a different number pattern.

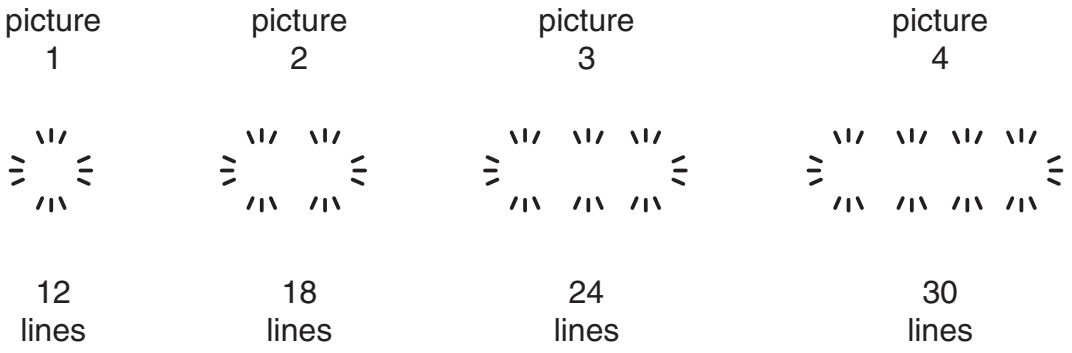
51 41 43 33 35 25 27 ....

Explain how to work out the next two numbers in this pattern.

.....

.....[2]

(c) Here is another number pattern.



This formula is used to find the number of lines for a picture.

multiply the picture number by 6 then add 6

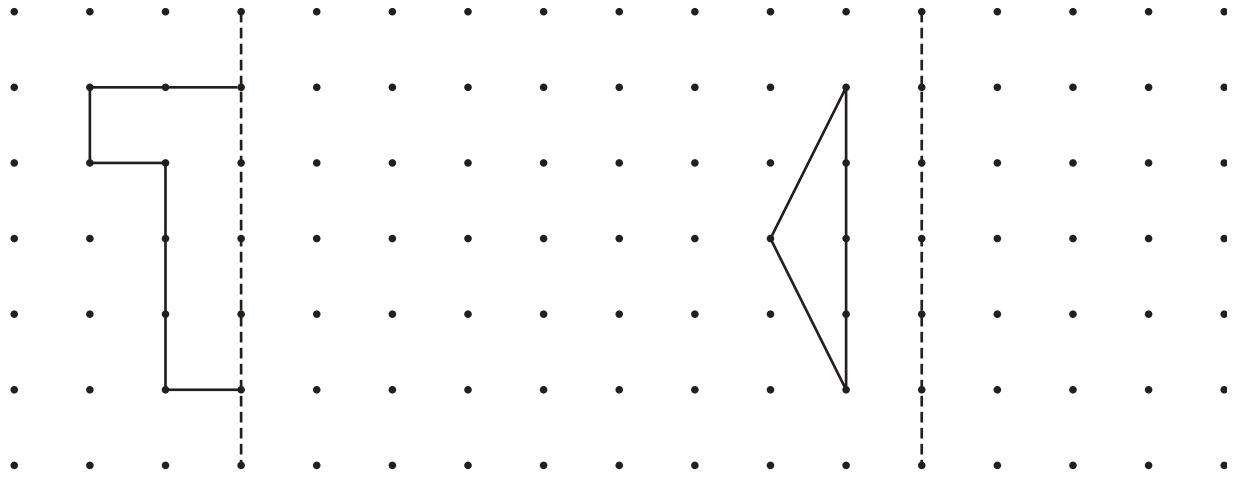
Use the formula to find the number of lines for picture 10.

(c) .....[2]

6

[Turn over

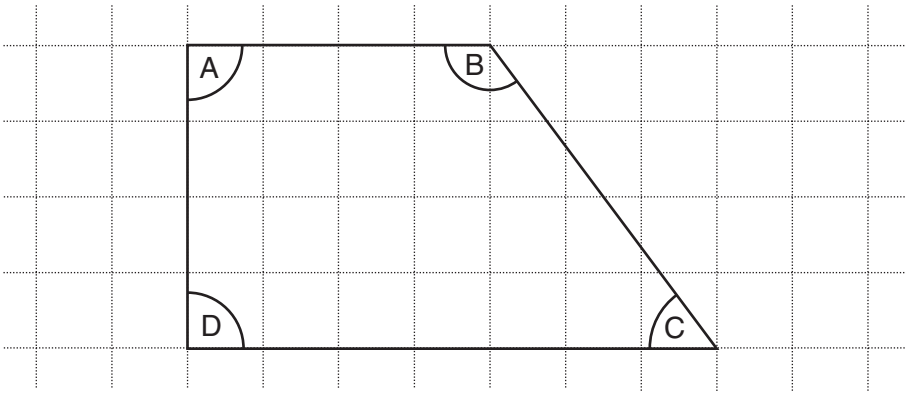
10 Complete each shape so that the dashed line is a line of reflection symmetry.



[4]

4

11



(a) Complete.

Angle ..... is acute.

Angle ..... is a right angle.

Angle ..... is obtuse. [2]

(b) By measuring, find the perimeter of this shape.

(b) .....cm [2]

4

12 Abu kept a record of the weather each day for 4 weeks.
This pictogram shows some of his results.

Cloudy	
Foggy	
Rainy	
Sunny	

Key	
	stands for 2 days

(a) Six days were Cloudy.

Show this on the pictogram. [1]

(b) Which type of weather was most common?

(b) .....[1]

(c) How many days were Foggy?

(c) .....[1]

3

13

Tanya breaks the records!

Tanya Streeter held her breath for 218 seconds when she dived to a depth of 121 metres on Monday July 21st 2003, breaking the male and female world records. Her heart rate slowed to 15 beats per minute and her lungs compressed to the size of scrunched up plastic bags.

(a) Complete.

218 seconds is the same as ..... minutes and ..... seconds. [2]

(b) About how many feet is 121 metres?
Ring the closest answer.

40 300 350 400 480 500 [1]

(c)

The next day Tanya set another world record for a single breath dive, this time without fins. She descended to a depth of 115 feet, resurfacing after 1 minute 44 seconds.

How much deeper is 121 metres than 115 feet?
Show all your working.
Give the units of your answer.

(c) .....[3]

(d) This table shows the previous records.

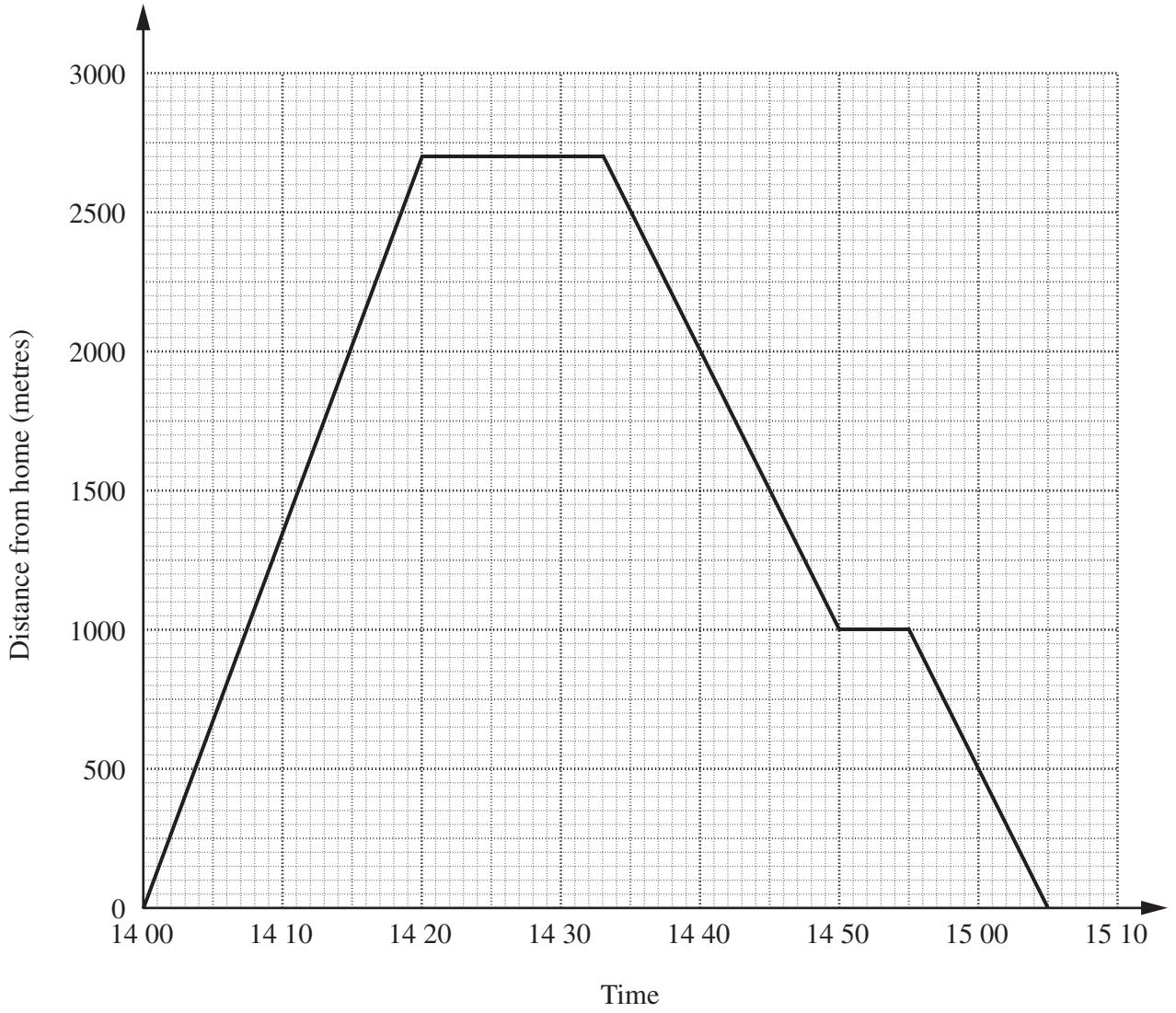
Free-dive World Records		
Female	Deborah Andollo	311·7 feet
Male	Patrick Musimu	393·7 feet

How much deeper was the male record than the female?

(d) .....feet [2]

8

14 Lesley walks from home to the Library.
On the way back home she stops at the Post Office.
This graph shows her journey.



Complete these sentences.

(a) It took ..... minutes to get to the Library. [1]

(b) The Library is ..... metres from home. [1]

(c) She spent ..... minutes in the Library. [1]

(d) The Post Office is ..... metres from the Library. [1]

4

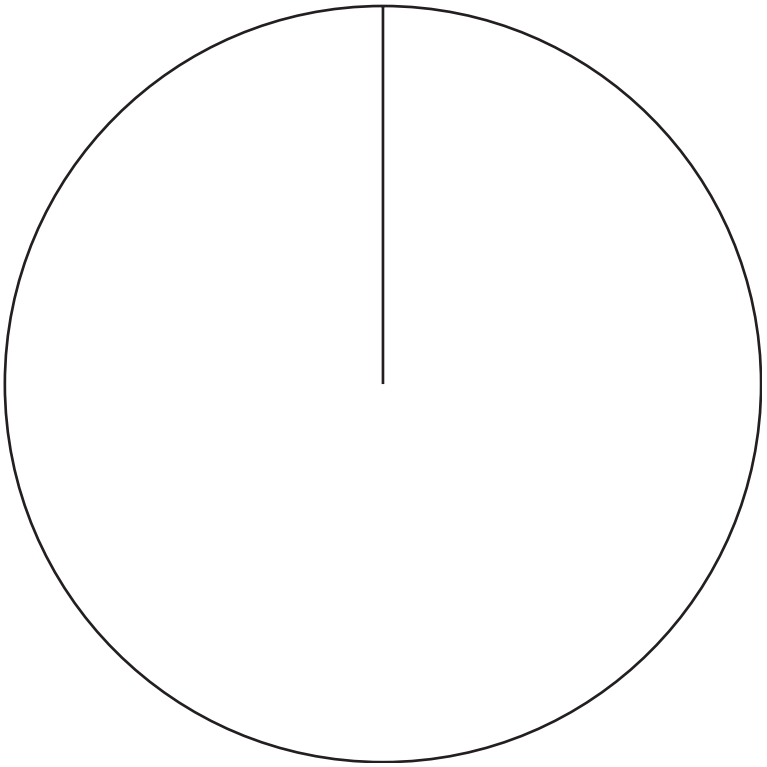
[Turn over

15 In an election, 180 people voted.

The table shows the number who voted for each party.

Party	Number of votes
Labour	36
Conservative	72
Lib. Dem.	45
Independent	27

Draw and label a pie chart to illustrate the data.



[4]

4

16 (a) Asim buys this television in Birmingham.

An image has been removed due to third party copyright restrictions

Details:

An image of a television set

VA T is charged at 17·5%.

Calculate how much Asim pays altogether for the television.

(a) £.....[3]

(b) Asim goes on holiday to Paris.
He sees the same television on sale for €1600 including VAT.
He knows £1 is worth €1·45.

Work out where the television is cheaper, and by how much.
Give your answer in pounds.
Show your working clearly.

(b) It is cheaper in ..... by £..... [3]

6

17 Calculate.

$$\frac{124{\cdot}5 + 92{\cdot}62}{26{\cdot}5 - 15{\cdot}85}$$

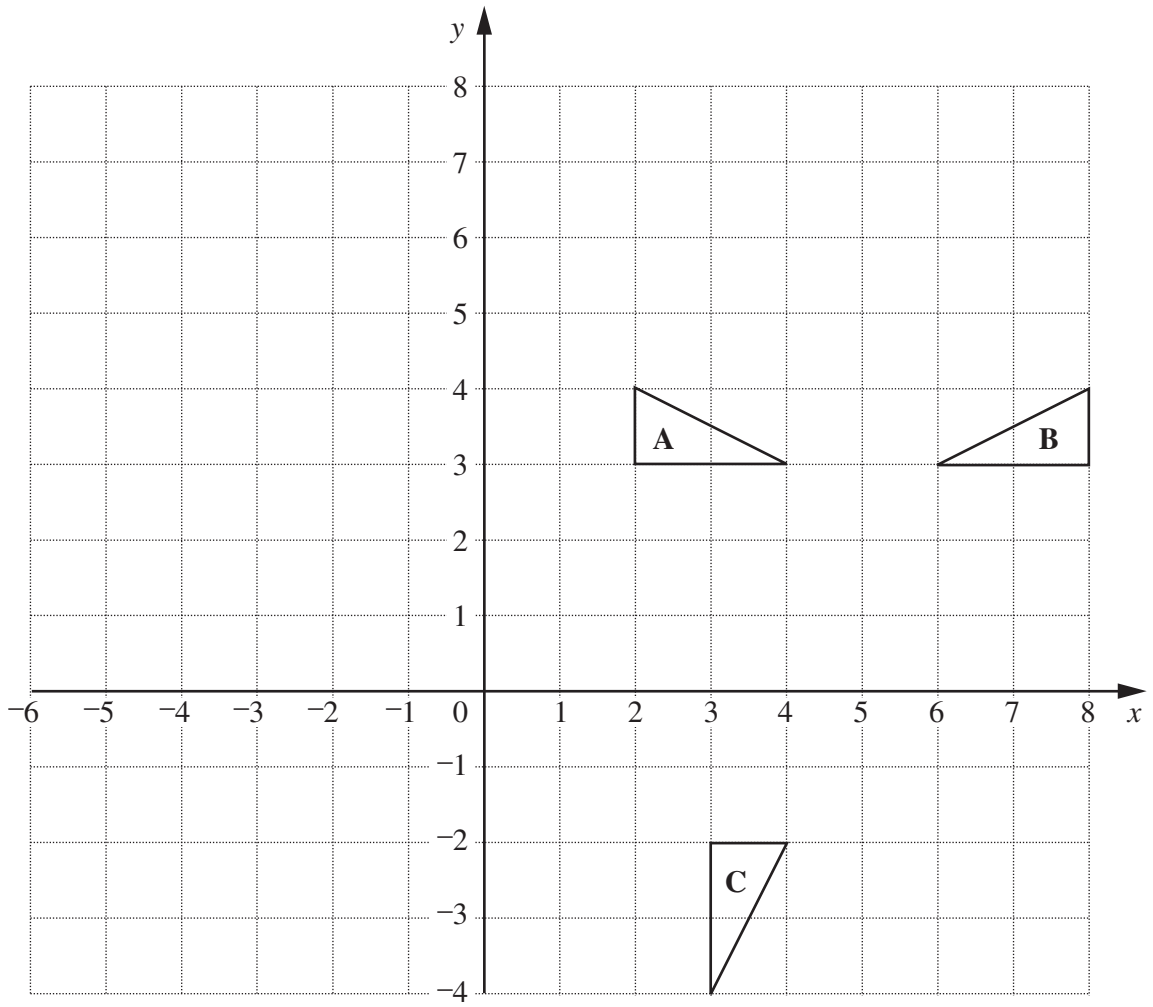
Give your answer correct to one decimal place.

.....[2]

2

[Turn over

18



(a) Complete this description of the **single** transformation which maps triangle **A** onto triangle **B**.

Reflection in .....[1]

(b) Describe in full the **single** transformation which maps triangle **A** onto triangle **C**.

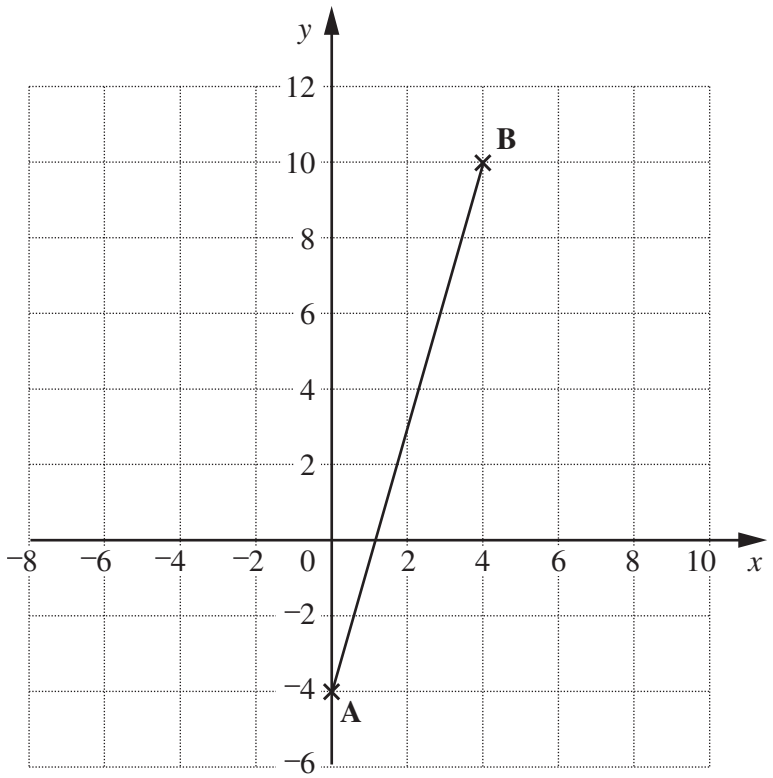
.....

.....[3]

(c) Translate triangle **A** by 6 squares left and 3 squares down.
Label your triangle **D**. [1]

5

19



A is the point (0, −4) and B is the point (4, 10).

(a) Write down the coordinates of the midpoint of AB.

(a) (..... , ...) [2]

(b) ABC is an isosceles triangle.
C is a point on this grid.

Write down the coordinates for two **different** possible positions of C.

(b) (..... , ...) [1]

(..... , ...) [1]

4

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