

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M4 – SECTION A

B274A

Candidates answer on the question paper

OCR Supplied Materials:

None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)

Tuesday 20 January 2009
Morning

Duration: 30 minutes



Candidate Forename		Candidate Surname	
--------------------	--	-------------------	--

Centre Number						Candidate Number				
---------------	--	--	--	--	--	------------------	--	--	--	--

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that 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.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

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 **8** pages. Any blank pages are indicated.

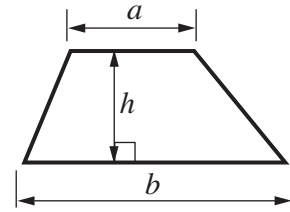
WARNING

No calculator can be used for Section A of this paper

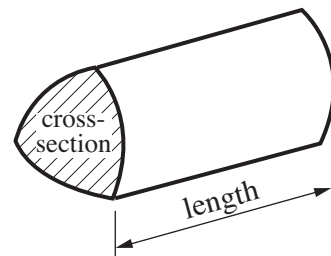
FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

Formulae Sheet

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



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



PLEASE DO NOT WRITE ON THIS PAGE

1 Complete each sentence with a **fraction**.

(a) 0.2 is the same as [1]

(b) 90% is the same as [1]

(c) 0.65 is the same as [1]

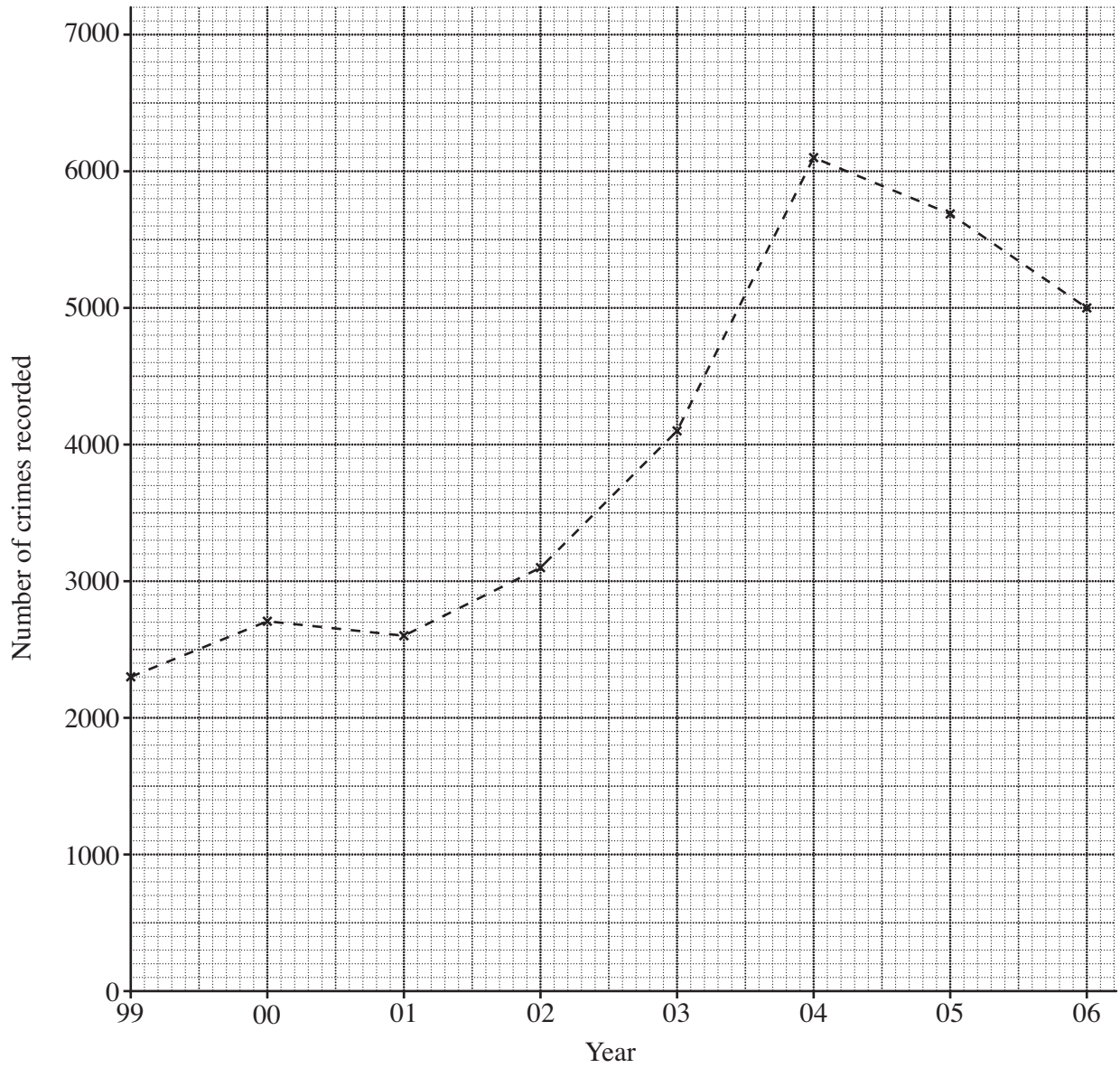
(d) 8% is the same as [1]

2 Complete this table.

Sequence	Fifth term	Rule
3 7 11 15	add 4
45 39 33 27	21
10 	8	subtract 0.5

[3]

- 3 This diagram shows information about the number of crimes in a certain category recorded by the police in England and Wales from 1999 to 2006.



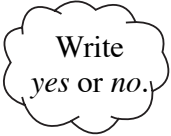
(a) Complete these statements.

The highest number of crimes recorded was

There were 2600 crimes recorded in the year

There were **more** crimes recorded in 2004 than 1999. [4]

(b) Is this statement true? Explain how you decide.

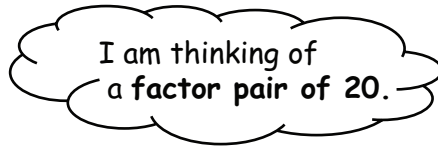


The number of these crimes recorded has started to fall.

..... because
..... [1]

4 Vicky and Dave are playing a guessing game.

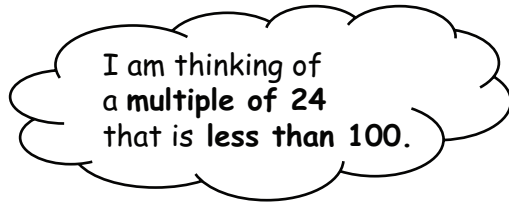
(a) Vicky says



Write down a factor pair of 20.

(a) and [1]

(b) Dave says



Write down a number this could be.

(b) [1]

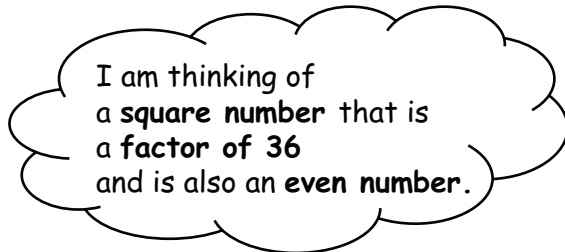
(c) Vicky says



Write down a number this could be.

(c) [1]

(d) Dave says



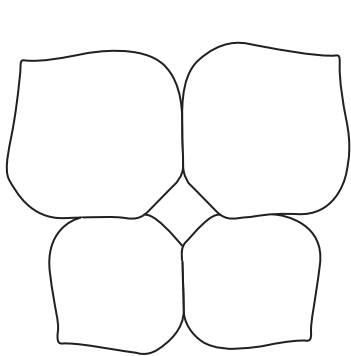
Write down a number this could be.

(d) [2]

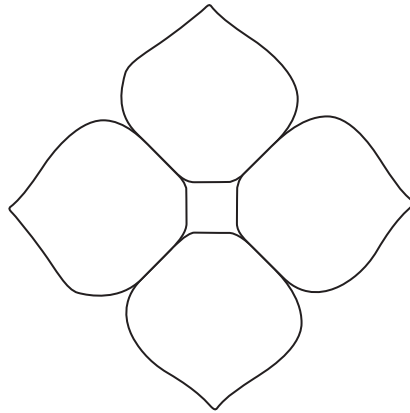
5 Here are some patterns.

Put a tick (✓) under each pattern that has rotation symmetry order 4.

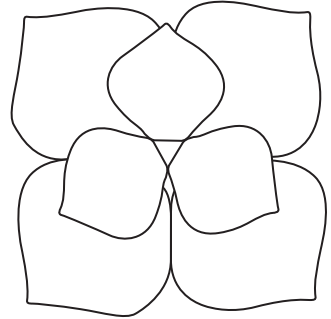
Put a cross (✗) under each pattern that does not.



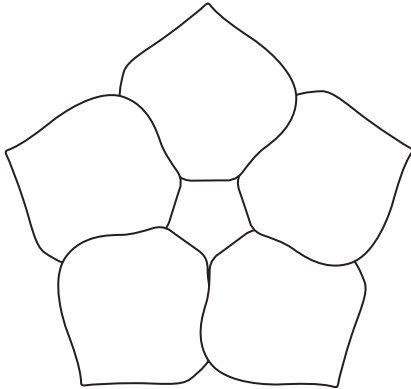
.....



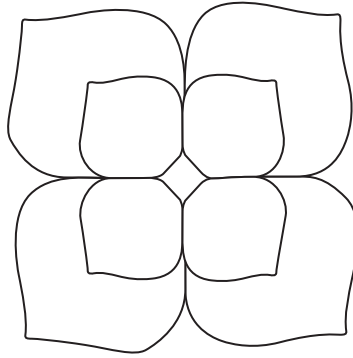
.....



.....



.....



.....

[2]

6 James needs 216 carpet tiles.
They cost 52p each.

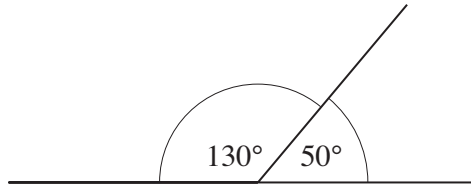
Work out the total cost in pence.

You must show all your working.

..... p [3]

TURN OVER FOR QUESTION 7

7 (a)



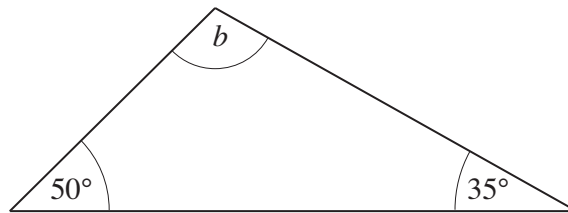
This diagram shows an angle fact.

Which of these is the **best** way to write this angle fact?
Put a tick (✓) next to your choice.

- the total of the angles is 180°
- angles on a straight line
- line = 180°
- angles on a straight line add up to 180°
- 180°
- straight line

[1]

- (b) Work out angle b .
Give a reason for your answer.



**Not to
scale**

Angle $b = \dots\dots\dots^\circ$ because $\dots\dots\dots$

$\dots\dots\dots$ [2]