OCR
RECOGNISING ACHIEVEMENT

B272A

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M2 – SECTION A

M2

TUESDAY 24 JUNE 2008

Morning
Time: 30 minutes

Candidates answer on the question paper
Additional materials (enclosed): None

Additional materials (required):
Geometrical instruments
Tracing paper (optional)

CUP/T60655

Candidate Forename		Candidate Surname	
Centre Number		Candidate Number	

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.

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**.

WARNING

You are not allowed to use a calculator in Section A of this paper.

FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

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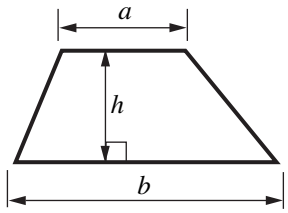
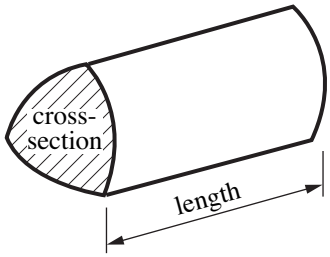
Formulae Sheet

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



Volume of prism = (area of cross-section) × length



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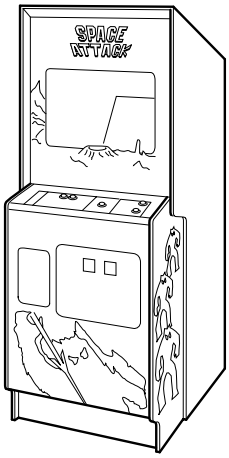
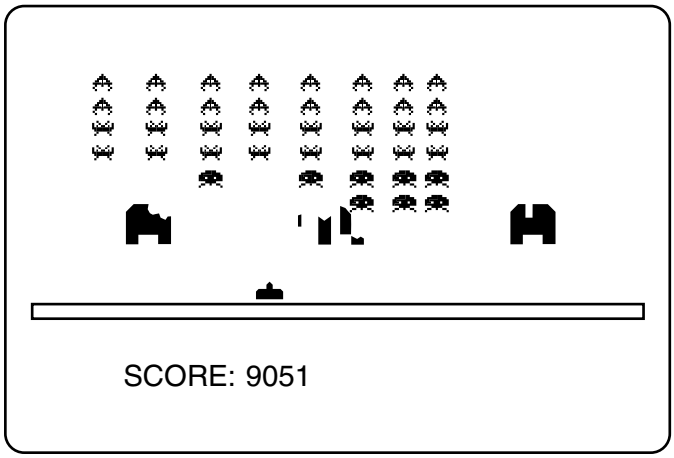
1 Amy got a Space Attack game machine at a car boot sale.





Amy scores 9051 points.

Write 9051 in words.

..... [1]

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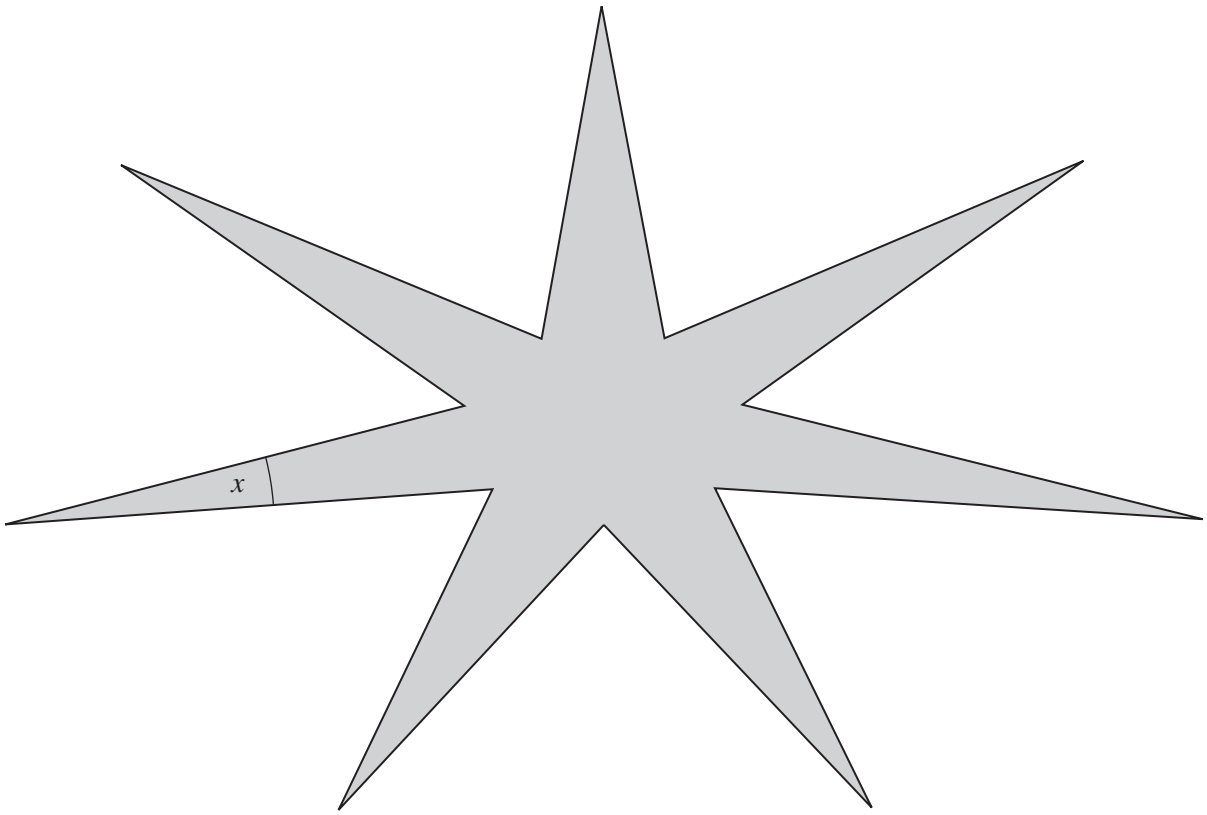
2 **(a)** This shape is a space mine used in Space Attack.

Measure the angle marked x.



(a).....° [1]

(b) Here is a delta spaceship.

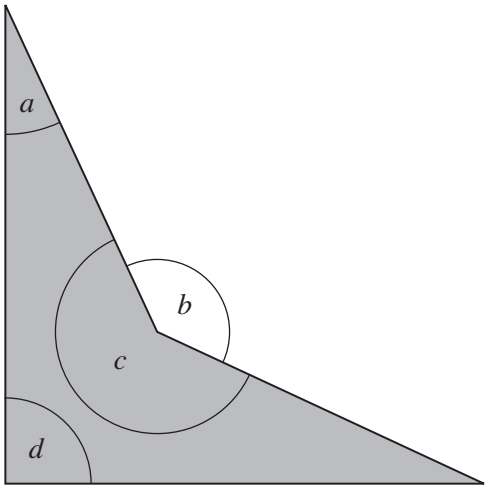
Complete the sentences below.

Angle ..... is an obtuse angle.

Angle ..... is an acute angle.

Angle ..... is a right angle.

Angle ..... is a reflex angle.



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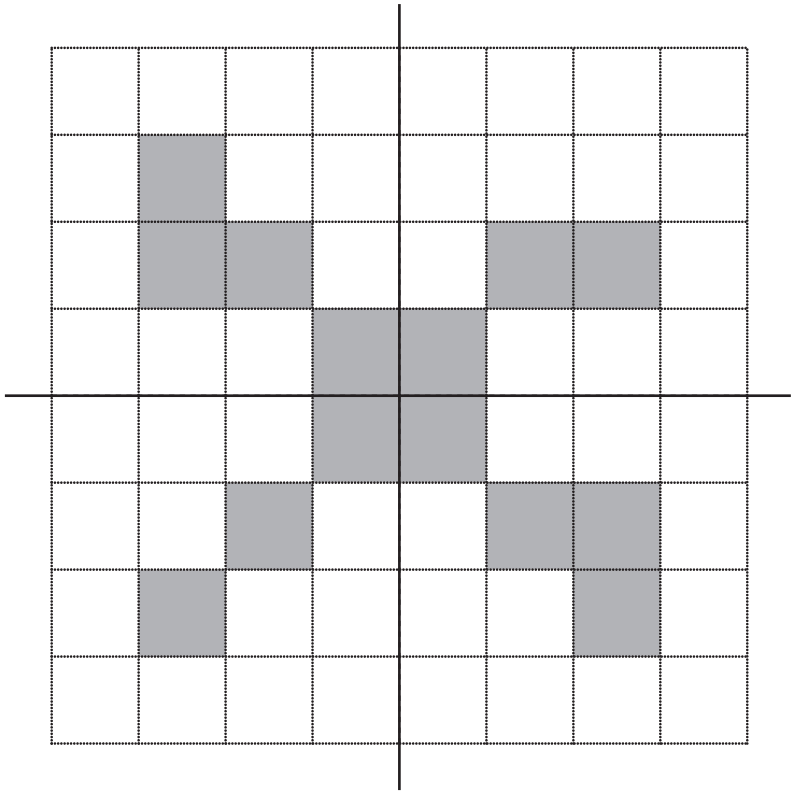
(c) Amy has started to draw an alien.

Shade **two** more squares so that the alien has two lines of reflection symmetry.



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3 Here are Amy's Space Attack scores for 7 games.

3010 3350 3010 9051 3400 3130 3150

(a) Write down the mode of these scores.

(a) ..... [1]

(b) Find the median score.

(b) ..... [2]

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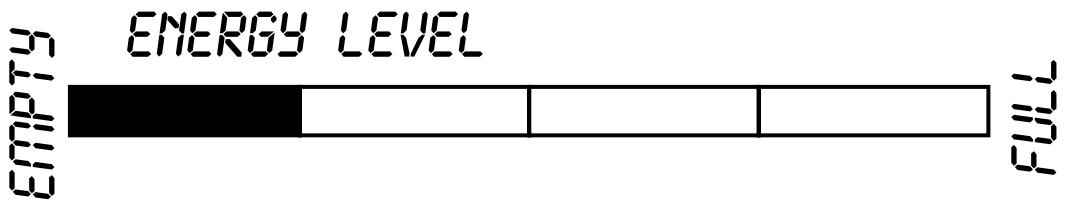
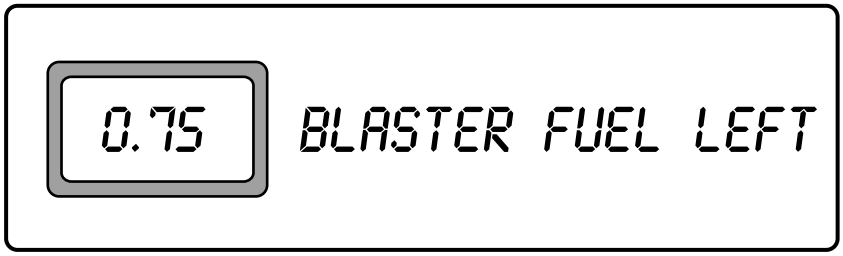
4 **(a)** This is the energy scale in a video game.
It shows how much energy is left.



What percentage of energy is left?

(a) .....% [1]

(b)



Write 0·75 as a fraction.

(b) ..... [1]

(c) Amy collects PC versions of arcade games.

How much will these two games cost altogether?

(c) £ ..... [2]

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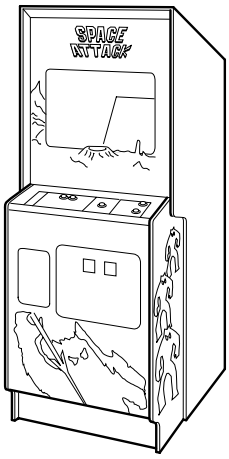
5 **(a)** Space Attack can be downloaded and played on a mobile phone.



(i) The original Space Attack machine weighs about 100 kg.

Write 100 kg in grams.

(a)(i) ..... g [1]

(ii) Amy's mobile phone weighs about 100 g.

Write 100 g in kilograms.

(ii) ..... kg [1]

(b) Amy downloads 16 games to her mobile phone.
She pays £3 for each game.

How much does she pay in total?

(b) £ ..... [2]

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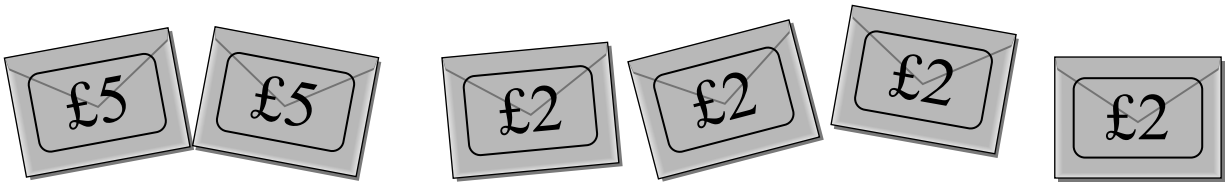
6 At a party, each of the six children is given a book token in their goody bag.
The bags are shuffled.

(a)



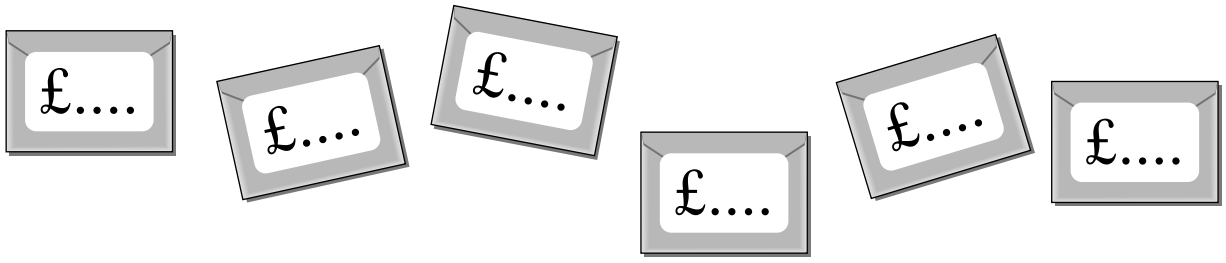
Mark on this probability line the probability of getting a bag with a £2 book token.

[1]

(b) At another party there are £10, £5 and £1 book tokens.

Write £10, £5 or £1 on each envelope so that children have

- an **even chance** of getting a £10 book token and
- are **more likely** to get a £5 book token than a £1 book token.



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7 Here is a number pattern.

0 5 10 15 ...

Here is another number pattern.

6 9 12 15 ...

The number 15 is in both number patterns.

Find another number which is in both number patterns.
You must show how you got your answer.

..... [3]

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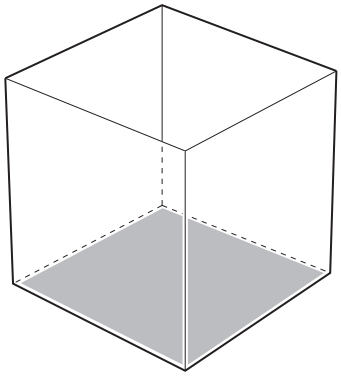
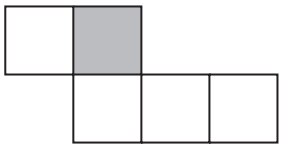
8 This box is a cube without a top.
The bottom face is painted grey.
All the other faces are white.



Put a tick (✔) under each diagram that is a net for this box.
Put a cross (✘) under each diagram that is not a net for this box.



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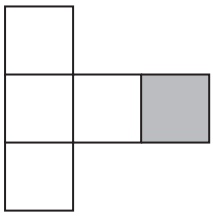

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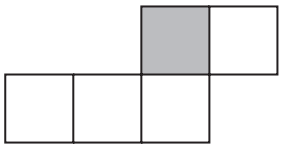

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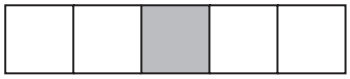

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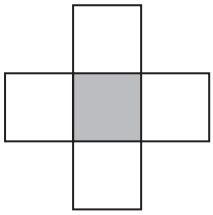

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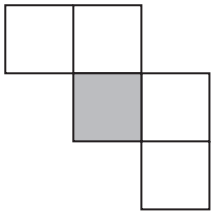

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