Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						5	5	3	6	/	1	6	Signature	

Paper Reference(s)

5536/16

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics B – 1388

Paper 16 (Non-Calculator)

Intermediate Tier

Monday 4 June 2007 – Afternoon

Time: 1 hour 15 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
You must NOT write on the formulae page. Anything you write on the formulae page will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 21 questions in this question paper. The total mark for this paper is 62.
There are 16 pages in this question paper. Any blank pages are indicated.
Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

Printer's Log. No.
N25773A
W850/R5536/57570 6/6/6/4

N 2 5 7 7 3 A 0 1 1 6

Turn over

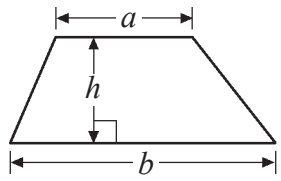
edexcel
advancing learning, changing lives

GCSE Mathematics 1387/8

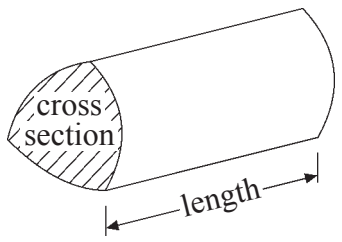
Formulae: Intermediate Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

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



Volume of prism = area of cross section × length



Leave blank

Answer ALL TWENTY ONE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1.

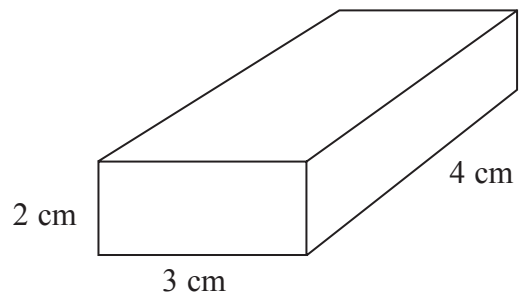
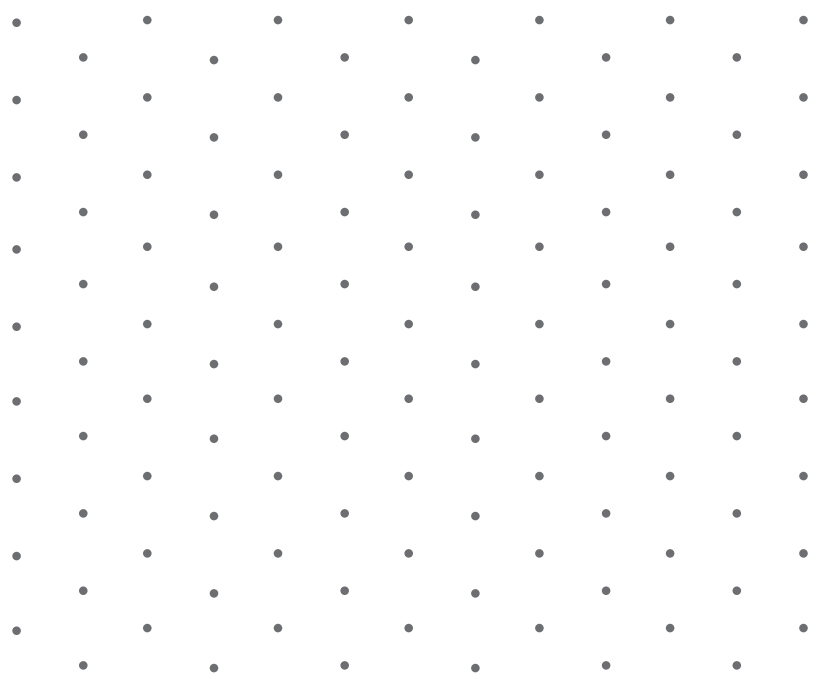


Diagram **NOT** accurately drawn

The diagram shows a solid cuboid.
On the isometric grid, make an accurate full size drawing of the cuboid.



Q1

(Total 2 marks)

Leave blank

2. Kavic wants to collect some information about the different makes of cars in a car park.

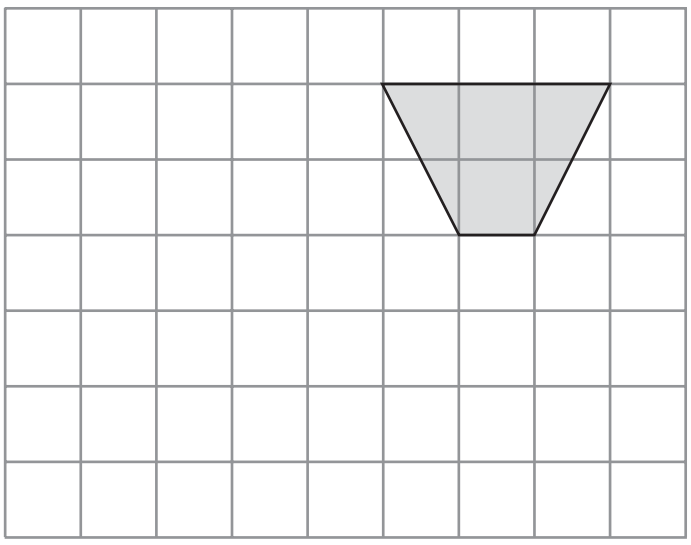
Design a suitable data collection sheet that Kavic could use to collect this information.

Q2

(Total 3 marks)

3. On the grid, show how this shape tessellates.

You should draw at least 6 shapes.



Q3

(Total 2 marks)

Leave blank

4. Work out 3.15×24

.....

Q4

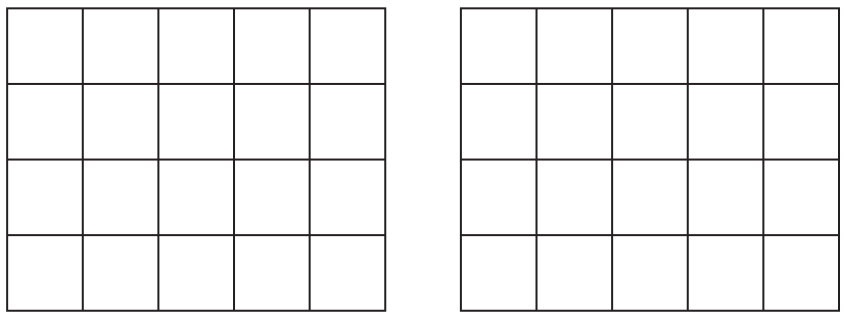
(Total 3 marks)

5. Here are two fractions $\frac{3}{4}$ and $\frac{4}{5}$

Which is the larger fraction?

You must show your working to explain your answer.

You may use the grids to help with your explanation.



..... is the larger fraction

Q5

(Total 3 marks)

Leave blank

6. The cost of 9 sweets is 36p.
The cost of each sweet is the same.

Work out the cost of 6 of these sweets.

..... p
(Total 2 marks)

Q6

7. Emily has a bag of 20 fruit flavour sweets.

7 of the sweets are strawberry flavour,
11 are lime flavour,
2 are lemon flavour.

Emily takes at random a sweet from the bag.

Write down the probability that Emily

(a) takes a strawberry flavour sweet,

.....
(1)

(b) takes an orange flavour sweet.

.....
(1)

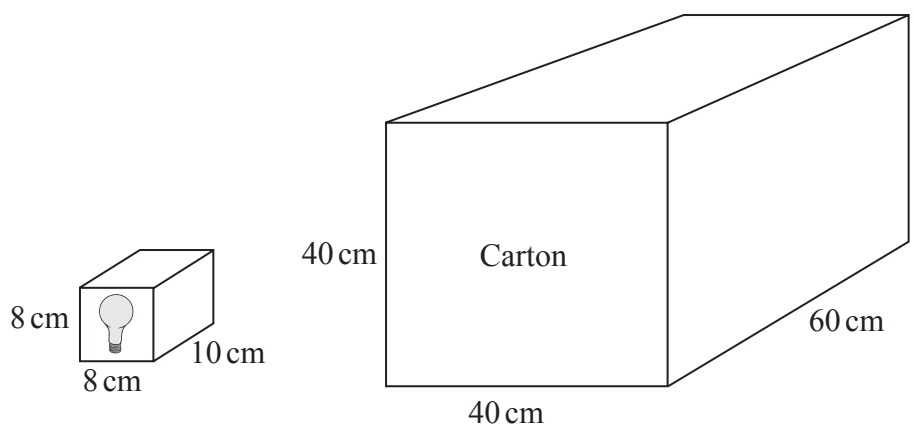
(Total 2 marks)

Q7

Leave blank

8.

Diagrams **NOT** accurately drawn



A light bulb box measures 8 cm by 8 cm by 10 cm.
Light bulb boxes are packed into cartons.
A carton measures 40 cm by 40 cm by 60 cm.

Work out the number of light bulb boxes which can completely fill **one** carton.

.....

(Total 4 marks)

Q8

Leave blank

9. A cup of tea costs 80 pence.

(a) Write down an expression, in terms of x, for the cost, in pence, of x cups of tea.

..... pence
(1)

A cup of coffee costs 95 pence.

(b) Write down an expression, in terms of y, for the cost, in pence, of y cups of coffee.

..... pence
(1)

(c) Write down an expression, in terms of x and y, for the total cost, in pence, of x cups of tea and y cups of coffee.

..... pence
(2) **Q9**

(Total 4 marks)

10. (a) Work out the value of $3x - 4y$ when $x = 3$ and $y = 2$

.....
(2)

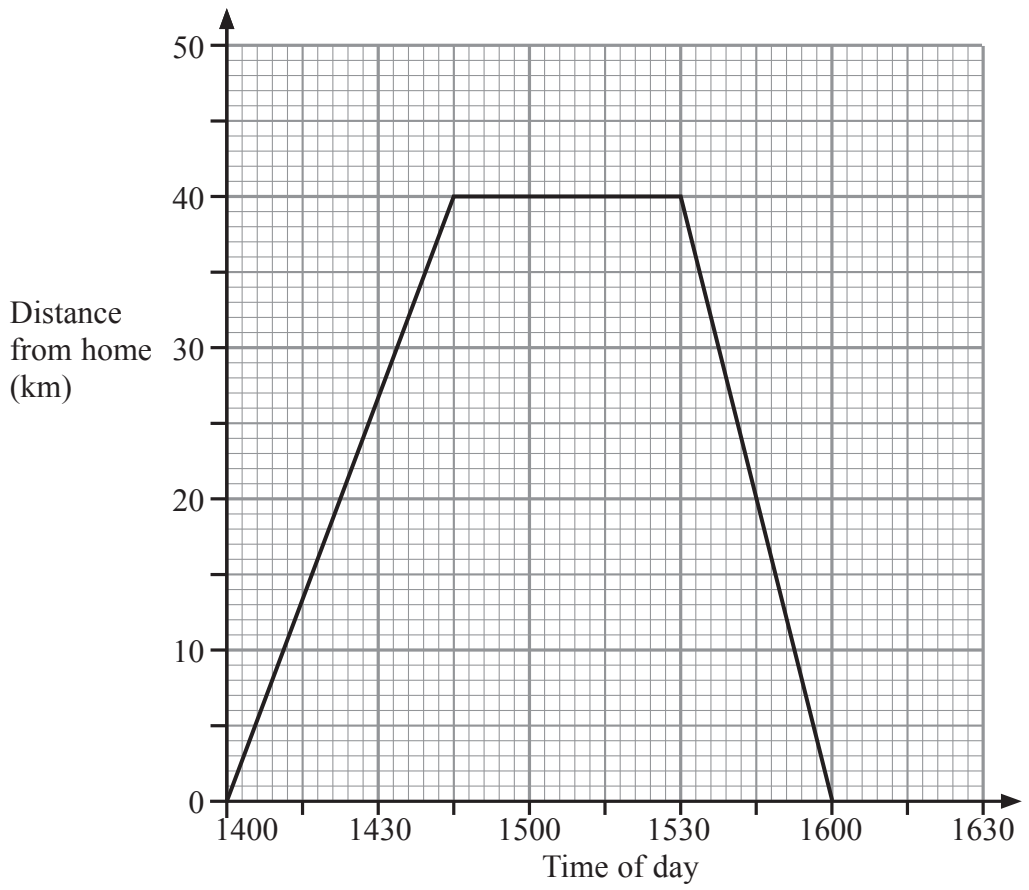
(b) Work out the value of $\frac{p(q-3)}{4}$ when $p = 2$ and $q = -7$

.....
(3) **Q10**

(Total 5 marks)

Leave blank

11. Judy drove from her home to the airport.
She waited at the airport.
Then she drove home.
Here is the distance-time graph for Judy's complete journey.



(a) What is the distance from Judy's home to the airport?

..... km
(1)

(b) For how many minutes did Judy wait at the airport?

..... minutes
(1)

(c) Work out Judy's average speed on her journey home from the airport.
Give your answer in kilometres per hour.

..... kilometres per hour
(2)

Q11

(Total 4 marks)

Leave blank

12. The point A has coordinates (–3, 2)
The point B has coordinates (7, 6)

Find the coordinates of the midpoint of the line segment AB.

(..... , ...)
(Total 2 marks)

Q12

13. The table shows some expressions.
a, b, c and d represent lengths.
π and 3 are numbers that have no dimensions.

$\pi a^2 + ab$	$3a^3$	$a(3d+b)$	$3ab+c$	$\pi c^2 d$	$3(b+d)$	$\frac{\pi ab^2}{3d}$

Tick (✓) the boxes underneath the **three** expressions which could represent areas.

(Total 3 marks)

Q13

14. Expand $x(3 - 2x^2)$

.....
(Total 2 marks)

Q14

15. The volume of this cube is $8\,m^3$.

Change $8\,m^3$ to cm^3.

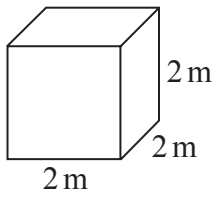


Diagram **NOT** accurately drawn

..... cm^3
(Total 2 marks)

Q15

Leave blank

16.

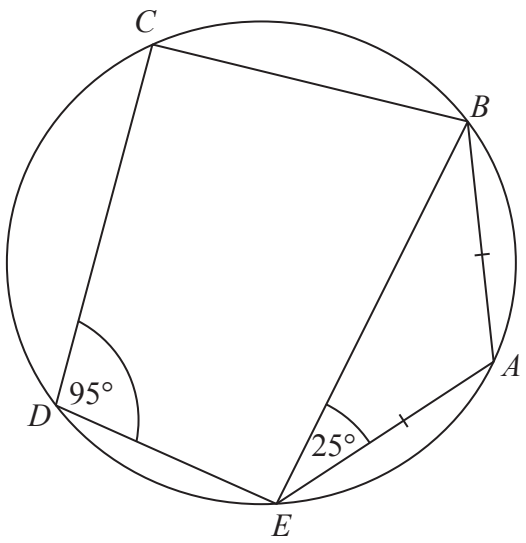


Diagram **NOT** accurately drawn

A, *B*, *C*, *D* and *E* are five points on a circle.
Angle *BEA* = 25° and angle *CDE* = 95°.
AB = *AE*.

(a) (i) Work out the size of angle *BAE*.

..... °

(ii) Give reasons for your answer.

.....

.....

.....

(3)

(b) Work out the size of angle *CBE*.

..... °

(1)

(Total 4 marks)

Q16

Turn over

Leave blank

17. (a) Write as a power of 7

(i) $7^8 \div 7^3$

.....

(ii) $\dfrac{7^2 \times 7^3}{7}$

.....

(3)

(b) Write down the reciprocal of 2

.....

(1) **Q17**

(Total 4 marks)

18. Work out $2\frac{2}{3} \times 1\frac{1}{4}$

Give your answer in its simplest form.

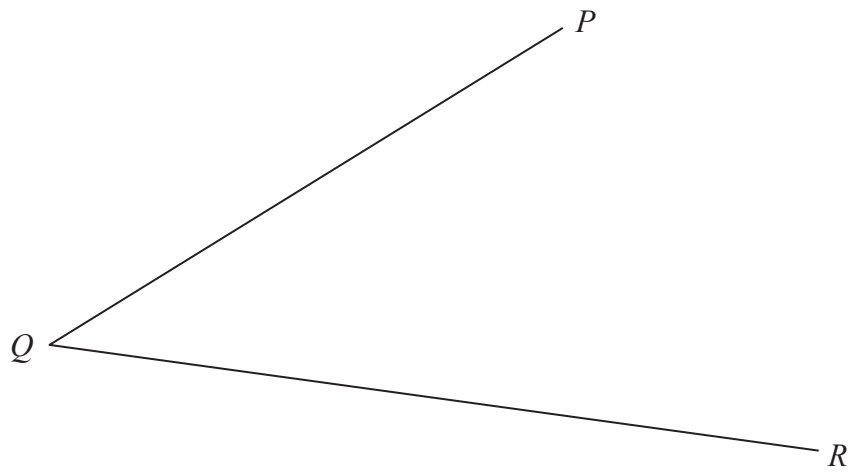
Q18

.....

(Total 3 marks)

Leave blank

19.



Use ruler and compasses to **construct** the bisector of angle *PQR*.
You must show all your construction lines.

Q19

(Total 2 marks)

20. Solve the simultaneous equations

$$4x + 2y = 8$$
$$2x - 5y = 10$$

Q20

$x =$ ..... , $y =$ .....

(Total 3 marks)

Leave blank

21. (i) Factorise $x^2 - 2x - 15$

.....

(ii) Solve the equation $x^2 - 2x - 15 = 0$

Q21

.....

(Total 3 marks)

TOTAL FOR PAPER: 62 MARKS

END

BLANK PAGE

BLANK PAGE