| Centre No. | | | | | | Paper Reference | | | | | | Surname | | Initial(s) |
| Candidate No. | | | | | | **5** | **5** | **3** | **6** | **/** | **1** | **7** | Signature | |

Edexcel GCSE

Mathematics B – 1388

Paper 17 (Calculator)

Intermediate Tier

Monday 11 June 2007 – Morning

Time: 1 hour 15 minutes

Materials required for examination	**Items included with question papers**
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.	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 17 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 may be used.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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.

Turn over

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

Volume of prism = area of cross section × length

M 2 5 7 7 4 A 0 2 1 6
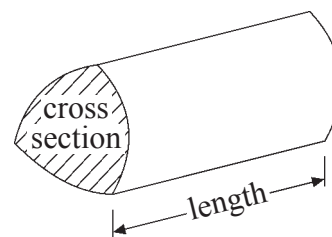
Answer ALL SEVENTEEN questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1. Jamie goes on holiday to Florida.
    The exchange rate is £1 = 1.70 dollars.

    He changes £900 into dollars.

    (a) How many dollars should he get?

    .... dollars
    (2)

    After his holiday Jamie changes 160 dollars back into pounds.
    The exchange rate is still £1 = 1.70 dollars.

    (b) How much money should he get?
        Give your answer to the nearest penny.

    £ ....
    (2)

    (Total 4 marks)

Q1

M 2 5 7 7 4 A 0 3 1 6

2. (a) Use your calculator to work out $\dfrac{4.7}{9.4-3.5}$

Write down all the figures on your calculator display.

....
(2)

(b) Write these numbers in order of size.
Start with the smallest number.

$$0.82 \qquad \frac{4}{5} \qquad 85\% \qquad \frac{2}{3} \qquad \frac{7}{8}$$

....
(2)
(Total 4 marks)

Q2

3. The two-way table shows some information about students in Years 7, 8 and 9.

	Year 7	Year 8	Year 9	Total
Can swim		61	74	
Cannot swim	33			60
Total			84	250

Complete the two-way table.

Q3

(Total 3 marks)

4. (a) Complete the table of values for $y = 2x + 1$

x	-2	-1	0	1	2	3
y		-1	1			

(2)

(b) On the grid, draw the graph of $y = 2x + 1$
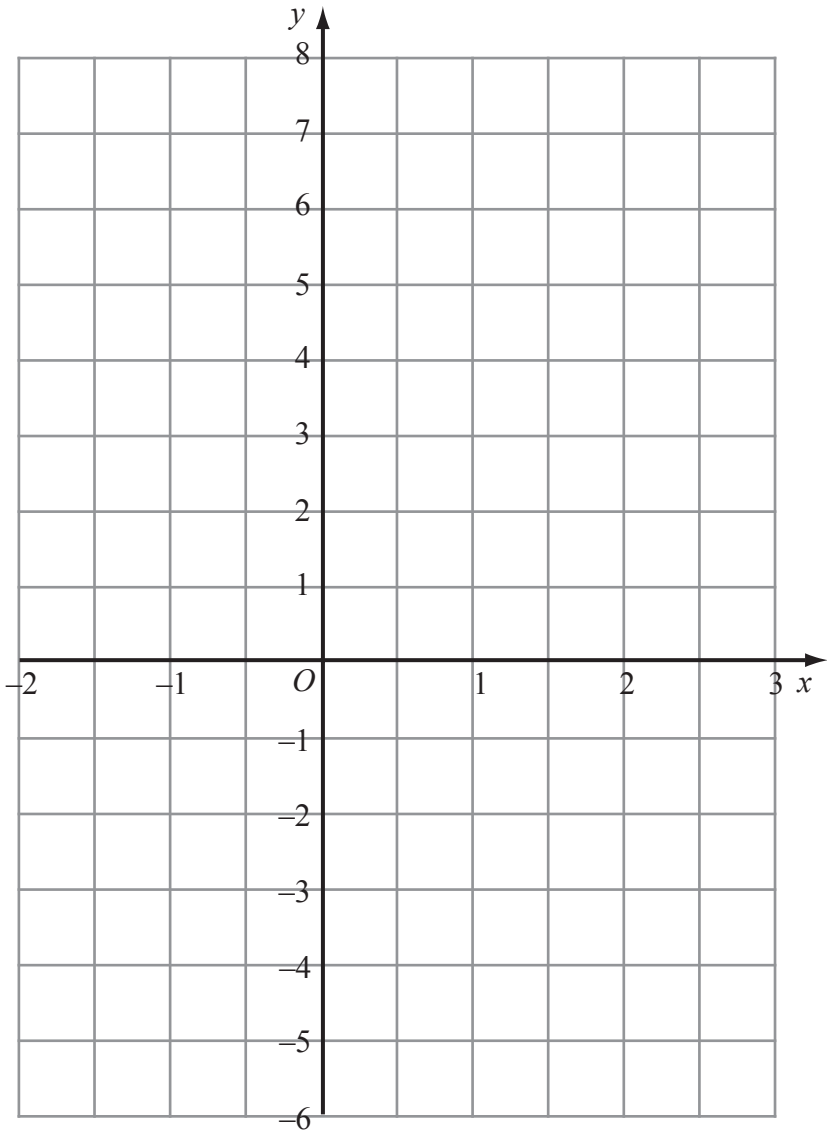
(2)

(c) Use your graph to find

(i) the value of y when $x = -1.5$

$y = \ ....$

(ii) the value of x when $y = 6$

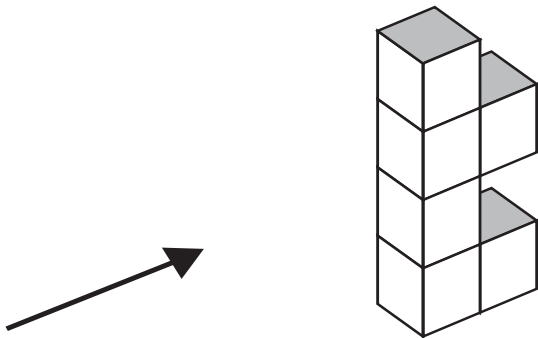$x = \ ....$

(2)

(Total 6 marks)

5. Tom the plumber charges £35 for each hour he works at a job, plus £50
The amount Tom charges, in pounds, can be worked out using this rule.

> Multiply the number of hours
> he works by 35
>
> Add 50 to your answer

Tom charged a customer £260 for a job.

(a) How many hours did Tom work?

.... hours

(3)

Tom works *h* hours at a job.
He charges *P* pounds.

(b) Write down a formula for *P* in terms of *h*.

....
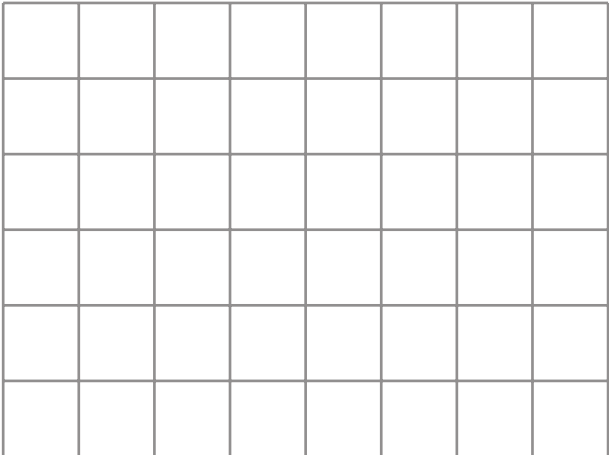
(3) Q5

(Total 6 marks)

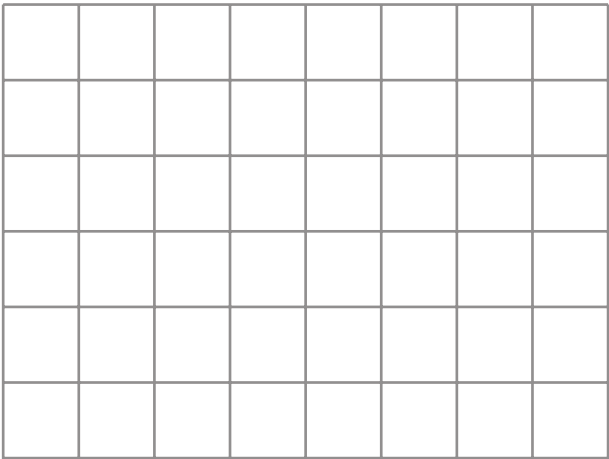**6.** The diagram shows a solid object made of 6 identical cubes.

(a) On the grid below, draw the side elevation of the solid object from the direction of the arrow.

(2)

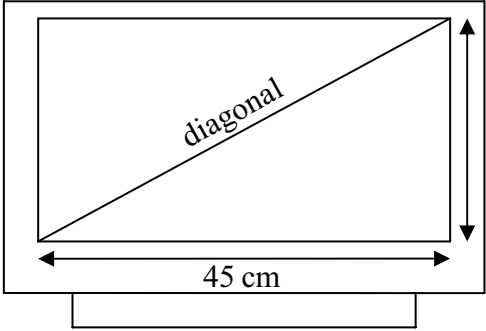(b) On the grid below, draw the plan of the solid object.

(2)

(Total 4 marks)

Q6

7. Here is a list of the ingredients needed to make scones for **4** people.

Scones

Ingredients for **4** people

200 g   of flour
  2   eggs
 50 g   of currants
100 m*l* of milk

Work out how much of each ingredient is needed to make scones for **6** people.

.... g of flour

.... eggs

.... g of currants

.... m*l* of milk

(Total 3 marks)

Q7
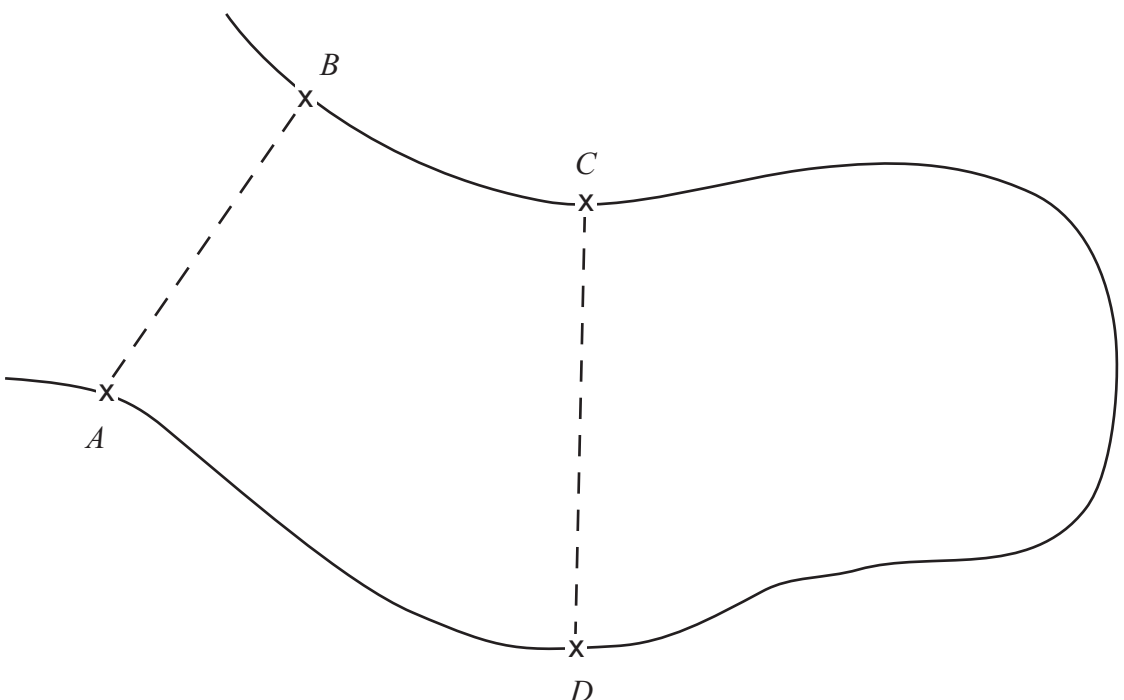
8. (a) Solve $6x - 7 = 38$

$x =$ ....
(2)

(b) Solve $4(5y - 2) = 40$

$y =$ ....
(3)

(Total 5 marks)

9.

Diagram **NOT** accurately drawn

34 cm

45 cm

diagonal

A rectangular television screen has a width of 45 cm and a height of 34 cm.

Work out the length of the diagonal of the screen.
Give your answer correct to the nearest centimetre.

.... cm

(Total 4 marks)

10. James invested £2000 for three years in an Internet Savings Account.
He is paid 5.5% per annum **compound** interest.

Work out the **total interest** earned after three years.

£ **Q10**

(Total 3 marks)

11. The map shows part of a lake.

In a competition for radio controlled boats, a competitor has to steer a boat so that
    its path between *AB* and *CD* is a straight line
    this path is always the same distance from *A* as from *B*

On the map, draw the path the boat should take.

(Total 2 marks)

12. A shop sells fans.

The table shows the number of fans sold in each three-month period from January 2005 to June 2006.

Year	Months	Number of fans sold
2005	Jan – Mar	36
	Apr – Jun	62
	Jul – Sep	187
	Oct – Dec	23
2006	Jan – Mar	44
	Apr – Jun	82

Calculate the four-point moving averages for this information.
The first has been done for you.

......77........ ....
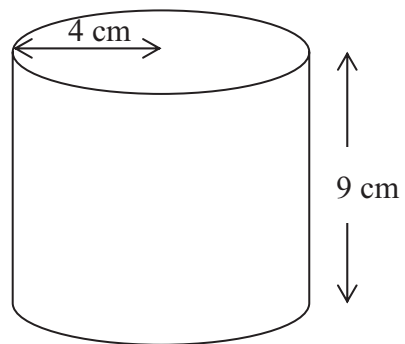
(Total 2 marks)

13.

4 cm

9 cm

Diagram **NOT** accurately drawn

A cylinder has a radius of 4 cm and a height of 9 cm.

Calculate the volume of the cylinder.
Give your answer correct to 3 significant figures.
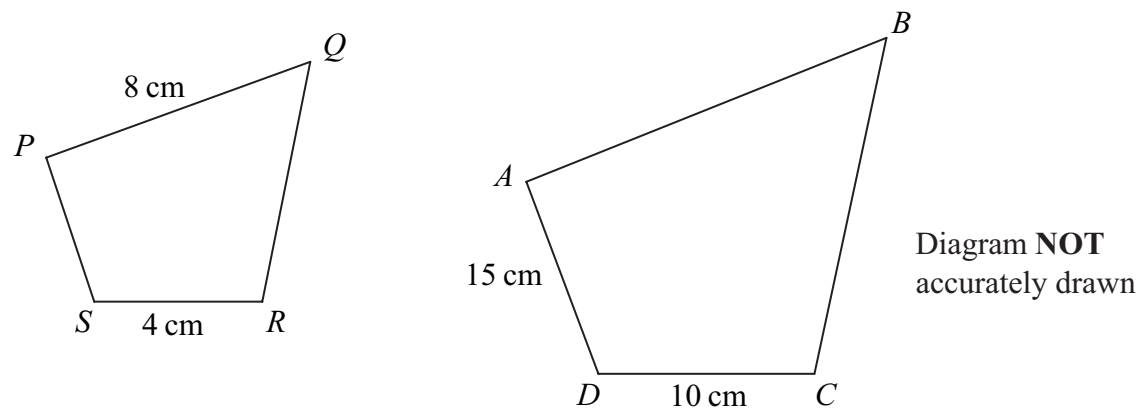You must include the units in your answer.

....

(Total 3 marks)

Q13

14. The diagram shows two quadrilaterals that are mathematically **similar**.

Q

8 cm

P

S   4 cm   R

B

A

15 cm

D   10 cm   C

Diagram **NOT** accurately drawn

In quadrilateral *PQRS*, *PQ* = 8 cm, *SR* = 4 cm.
In quadrilateral *ABCD*, *AD* = 15 cm, *DC* = 10 cm.
Angle *PSR* = angle *ADC*.
Angle *SPQ* = angle *DAB*.

(a) Calculate the length of *AB*.

.... cm
(2)

(b) Calculate the length of *PS*.

.... cm
(2)

Q14

(Total 4 marks)

15. Expand and simplify $(x + 3)(x - 4)$

....

(Total 2 marks)

16. In 2003 the population of Great Britain was 6.0×10^7
In 2003 the population of India was 9.9×10^8

(a) Work out the difference between the population of India and the population of Great Britain in 2003.
Give your answer in standard form.

....

(2)

In 1933 the population of Great Britain was 4.5×10^7

(b) Calculate the percentage increase in the population of Great Britain from 1933 to 2003.
Give your answer correct to one decimal place.

.... %

(3)

(Total 5 marks)

17. Jasmine and Charlie are going to meet at a concert.
The probability that Jasmine will arrive late is 0.3
The probability that Charlie will arrive late is 0.2

Complete the probability tree diagram.

Jasmine	Charlie

0.3   late
0.2   late
……..   not late
……..   late
……..   not late
……..   not late

(Total 2 marks)

TOTAL FOR PAPER: 62 MARKS

END

Q17