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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge Checkpoint

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

MATHEMATICS **1112/02**

Paper 2 **April/May 2008**

1 hour

Candidates answer on the Question Paper.

Additional Materials: Calculator
Protractor
Ruler

READ THESE INSTRUCTIONS FIRST

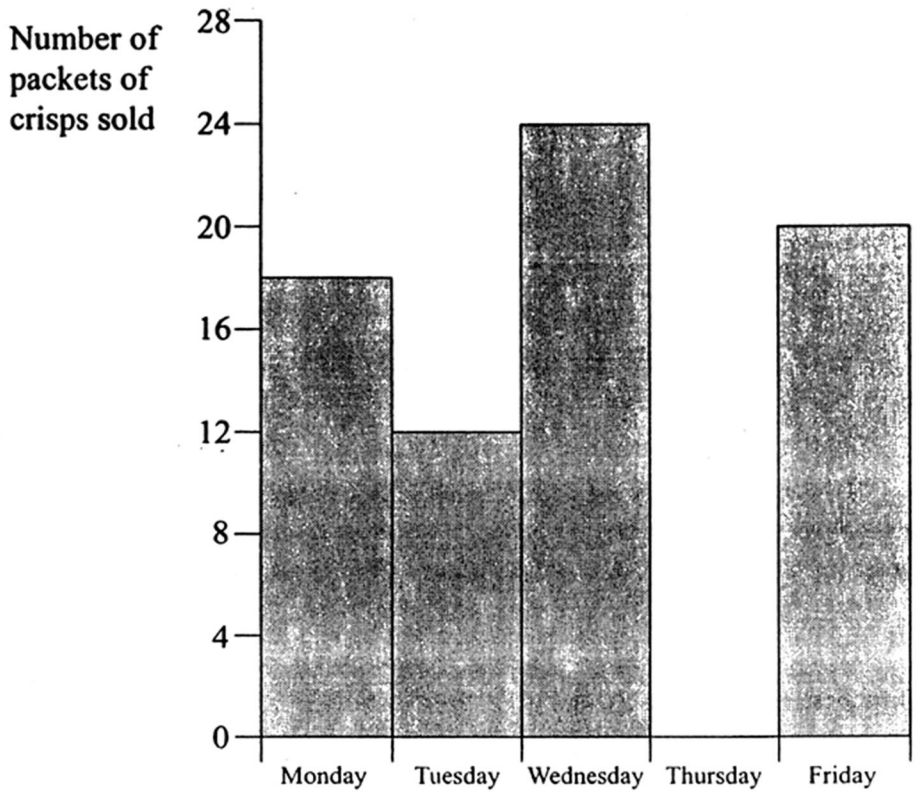
Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams or graphs.
Do not use staples, paperclips, highlighters, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

You should show all your working in the booklet.
The total number of marks for this paper is 50.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **9** printed pages and **3** blank pages.

1 **(a)** The bar chart below shows the number of packets of crisps sold by a tuck shop on four days.



(i) How many packets of crisps are sold on Monday?

.....packets [1]

(ii) 26 packets of crisps are sold on Thursday.
Show this information on the chart above. [1]

(b) The following week a total of 90 packets of crisps were sold.
A pie chart is drawn to show the information for each day.

(i) On Tuesday 13 packets were sold.
Work out the size of the angle which represents the number of packets of crisps sold on Tuesday.

..... [2]

(ii) The angle representing Thursday is 80°.
How many packets of crisps were sold on Thursday?

.....packets [1]

2 Write the number 243.482

(a) correct to the nearest whole number,

..... [1]

(b) correct to one decimal place,

..... [1]

(c) correct to one significant figure,

..... [1]

(d) in standard form.

..... [2]

3 The table below shows information about five players in a quiz game of two rounds.

In Round 2, one point is gained for a correct answer but lost for an incorrect answer.

For no answer to a question, no points are scored.

Points for both rounds are then totalled.

Complete the table.

Player	Round 2			Round 1 Total	Final Total
	Correct answer	Incorrect answer	Total		
Ashika	3	4	-1	8	7
Bindu	6	2		2	6
Chloe	2	5		1	
Deepak		4	-2	3	1
Emily	4		-2	4	2

[5]

4 The chart shows information about some of the examinations at a High School.

Subject	Paper	Day	Start Time	Finish Time	Length in minutes
English	1	Monday	09 30	11 00	90
	2	Tuesday	09 15		55
Mathematics	1	Monday		14 10	75
	2	Wednesday	12 30		
Science	1	Tuesday	13 15	14 00	45
	2	Wednesday	09 15	11 00	105

(a) Write the start time of Science Paper 1 using the 12-hour clock.

..... [1]

(b) Work out

(i) the finish time of English Paper 2,

..... [1]

(ii) the start time of Mathematics Paper 1.

..... [1]

(c) Mathematics Paper 2 contains 26 short questions.
Eve takes $2\frac{1}{2}$ minutes to complete each question.
How long does Eve take to complete the Mathematics paper?

..... minutes [1]

(d) Science Paper 2 contains five essay questions.
Students are told to spend the same amount of time on each question.
How long should a student spend on each question?

..... minutes [1]

5 Look at this sequence of numbers.

3, 7, 11, 15, 19

(a) Write down the next term in the sequence.

..... [1]

(b) Write down the eighth term in the sequence.

..... [1]

(c) Put a ring around the expression for the nth term of the sequence.

$3n + 1$ $3n + 2$ $4n - 1$ $5n$ $6n + 1$

[1]

6 Remove the brackets and simplify where possible.

(a) $4(3p + \ldots$

..... [2]

(b) $5r(r - \ldots) + 3$

..... [2]

(c) $m(m + \ldots) - mt$

..... [2]

7 **(a)** Solve.

$$3x - 2 = 7$$

..... [2]

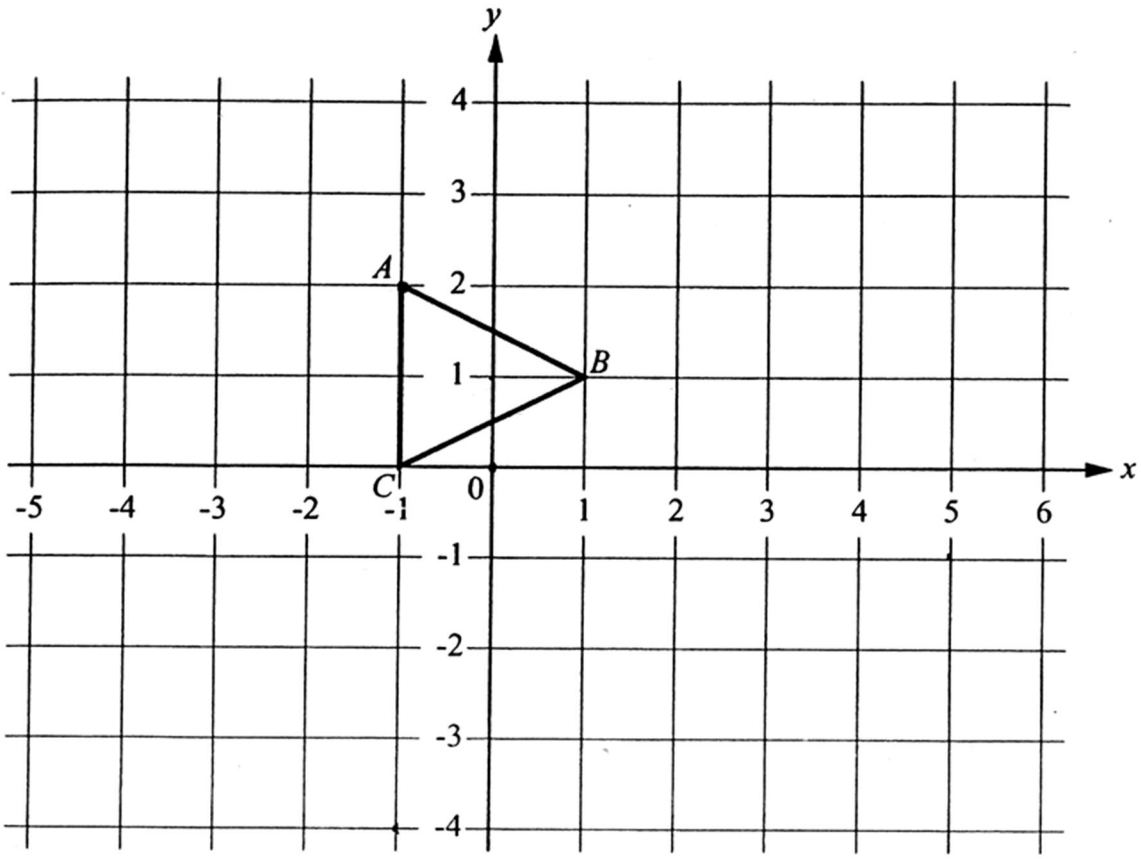
(b) Solve the simultaneous equations.

$$2x + y = 7$$
$$3x - y = 8$$

$x =$ .....

$y =$ ..... [3]

8 The diagram shows a triangle drawn on a grid.



(a) Write down the co-ordinates of the point A.

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

(b) On the grid, mark the point (5, -2). Label it P. [1]

(c) The point A is reflected in the x axis.

On the grid, plot clearly the new position of point A after this reflection.
Label the point Q. [1]

(d) Triangle ABC is rotated 90° clockwise about the point B.

On the grid, plot clearly the new position of point C after this rotation.
Label the point R. [1]

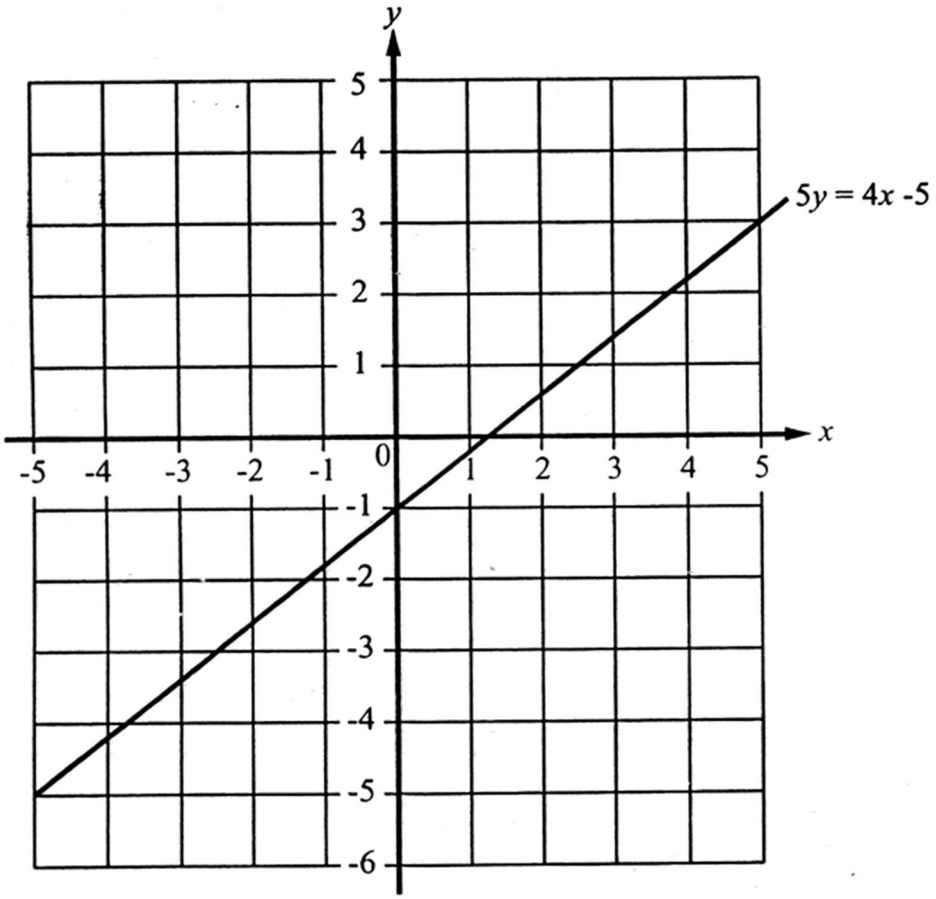
(e) Triangle ABC is enlarged about the point A with a scale factor of 3.
On the grid, plot clearly the new position of the point B after this enlargement.
Label the point S. [1]

9 **(a)** Complete the following table of values for the equation $y = -\frac{1}{2}x - 1$.

x	-4	-2	0	1	4
y		0	-1		

[2]

(b) Use your results to plot the graph of $y = -\frac{1}{2}x - 1$ on the grid below.



[1]

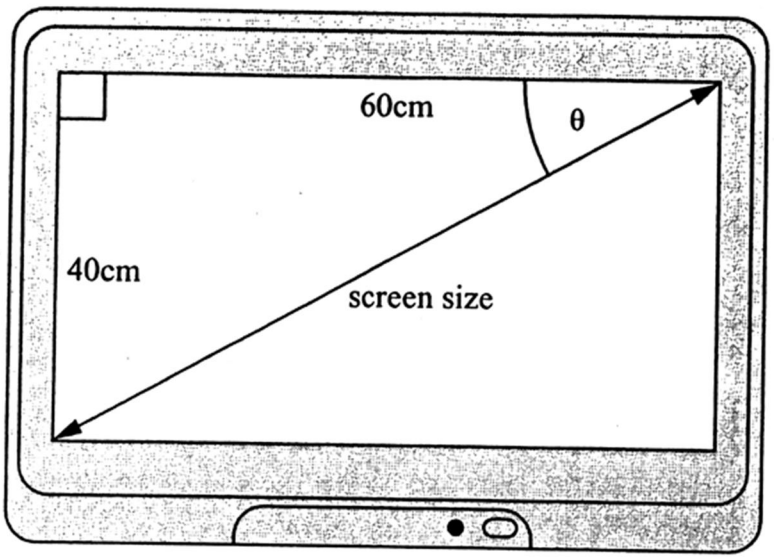
The graph of $5y = 4x - 5$ has been drawn on the grid above.

(c) **Use your graph to write down** the solution of the simultaneous equations $y = -\frac{1}{2}x - 1$ and $5y = 4x - 5$.

$x =$ ..... [1]

$y =$ ..... [1]

10 The screen size of a flat screen television is measured as shown on the diagram.



NOT TO SCALE

(a) Use Pythagoras' Rule to find the screen size of this television.

..... cm [3]

(b) Use trigonometry to calculate the size of angle θ.

..... [3]