

Centre Number	Candidate Number	Name
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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge Checkpoint

MATHEMATICS

1112/01

Paper 1

November 2005

1 hour

Candidates answer on the question paper

Additional Materials: Protractor
Ruler

NO CALCULATOR ALLOWED

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 in the spaces provided on the Question Paper.
You are not allowed to use a calculator.

Answer **all** questions.

You may use a soft pencil for any diagrams or graphs.

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 **10** printed pages and **2** blank pages.



1 Look at these numbers.

5

6

7

8

9

10

Using **only the numbers above**, write down

(a) a prime number,

..... [1]

(b) a square number,

..... [1]

(c) a factor of 55,

..... [1]

(d) $\sqrt{36}$,

..... [1]

(e) a cube number.

..... [1]

2 Write the correct number to go in each box.

(a) $3 \times \boxed{} = 21$ [1]

(b) half of 25 = $\boxed{}$ [1]

(c) $\boxed{} - 101 = 200$ [1]

(d) $23 \div 1000 = \boxed{}$ [1]

(e) $7 + 10 \div \boxed{} = 9$ [1]

3 A box contains 20 computer discs.

(a) $\frac{2}{5}$ of the discs are used.

(i) Write $\frac{2}{5}$ as a decimal.

..... [1]

(ii) Write $\frac{2}{5}$ as a percentage.

..... % [1]

(iii) Work out how many discs are used.

..... [1]

(b) 30% of the discs are damaged.

Write this as a fraction in its simplest form.

..... [2]

4 A school team plays nine football matches.

The list shows the number of goals scored in each match.

1 0 5 8 1 5 0 5 2

(a) Write down the range of goals scored.

..... [1]

(b) Write down the modal number of goals scored.

..... [1]

(c) Work out the median number of goals scored.

..... [1]

(d) Work out the mean number of goals scored.

..... [2]

5 (a) Show that $34 \times 1.2 = 40.8$.

..... [2]

(b) Use **part (a)** to write down the value of

(i) 3.4×1.2 ,

..... [1]

(ii) 340×0.12 ,

..... [1]

(iii) 17×12 .

..... [1]

6 Find the value of the following expressions when

$$r = 4, e = 5 \text{ and } x = 6.$$

(a) $5r + 3x + 2e$

..... [1]

(b) $\frac{3re}{x}$

..... [2]

(c) $4e^2$

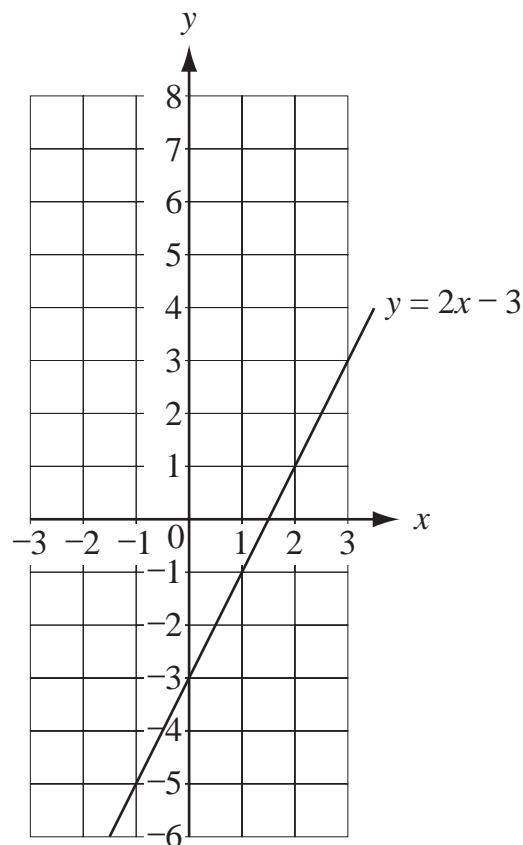
..... [2]

- 7 (a) Complete the table of values for $y = -3x + 2$.

x	-2	-1	0	1	2
y		5	2		

[2]

- (b) Use your results to plot the graph of $y = -3x + 2$ on the grid below.



[2]

- (c) The graph of $y = 2x - 3$ has been drawn on the grid above.
Use the **two graphs** to solve the simultaneous equations

$$y = -3x + 2,$$

$$y = 2x - 3.$$

$$x = \dots\dots\dots [1]$$

$$y = \dots\dots\dots [1]$$

8 Solve the following equations.

(a) $4x + 7 = 19$

$x =$ [2]

(b) $3(x - 2) = 12$

$x =$ [3]

9 Write the number 53 467

(a) correct to the nearest 10, [1]

(b) correct to three significant figures, [1]

(c) in standard form. [2]

- 10 The table shows some time differences.
It is not complete.

City	Hours difference from London
Los Angeles	-10
Mexico City	-6
Buenos Aires	
London	0
Johannesburg	+2
Riyadh	
Wellington	+12

- (a) Write down the time difference between

- (i) Los Angeles and Johannesburg,

..... hours [1]

- (ii) Johannesburg and Wellington,

..... hours [1]

- (iii) Los Angeles and Mexico City.

..... hours [1]

- (b) Malik flies from Los Angeles to Riyadh.

The time difference is 13 hours.

How many hours ahead of London is Riyadh?

..... [1]

- (c) Ellis flies from Johannesburg to Buenos Aires. The time difference is 5 hours.
How many hours is Buenos Aires behind London?

..... [1]

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