Centre Number	Candidate Number	Name

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge Checkpoint

MATHEMATICS   **1112/01**

Paper 1

May 2006

1 hour

Candidates answer on the Question Paper.
Additional Materials: 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, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
You are not allowed to use a calculator.

Answer **all** questions.
NO CALCULATOR ALLOWED
You should show all your working in the booklet.
The total number of marks for this paper is 50.
At the end of the examination, fasten all your work securely together.
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.

IB06 05_1112_01/4RP
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UNIVERSITY *of* CAMBRIDGE
International Examinations

[Turn over

1 Ryan is fitting some new water pipes.
The length, in metres, of five pipes is shown below.

0.57	2.45	1.30	1.73	1.92

(a) Work out the **total** length of all five pipes.

.... m   [1]

(b) Write the length of the longest pipe in centimetres.

.... cm   [1]

(c) The pipe which is 1.73 m long is cut from a 3 m length of pipe.
How much pipe is left?

.... m   [1]

(d) Another 3 m length of pipe is cut into eight equal pieces.
Work out the length of each of these pieces.

.... cm   [1]

(e) Pipe connectors cost 47 cents each.
Work out the total cost of seven connectors.

$ .... [1]

1 Complete the following statements.

(a) $550\,g =$ .... kg [1]

(b) $72.5\,cm =$ .... m [1]

(c) $0.753\,kg =$ .... g [1]

(d) $\frac{1}{4}$ litre = ... m*l* [1]

(e) $1.2\,m^2 =$ .... cm^2 [1]

3 (a) Write the number 673.27 correct to

    (i) one decimal place,

.... [1]

    (ii) two significant figures.

.... [1]

(b) Write 1.923×10^2 as an ordinary number.

.... [1]

(c) Write 670.000 in standard form.

.... [2]

4   Sonal is recording some television programmes.

(a) **Complete** the table below.

Programme	Start time	Finish time	Length (minutes)
1	07 00	07 40	40
2	08 45	09 35	
3	11 40		85
4		17 40	50

[3]

(b) Write the finish time of Programme 4 using the 12-hour clock.

.... pm   [1]

(c) Programmes 3 and 4 are recorded on the same 3 hour tape.
    Work out how much recording time is left on the tape.

.... minutes   [1]

5 The table below shows some of the temperatures at various times throughout Wednesday.

Time	0000	0400	0800	1200	1600	2000
Temperature (°C)	−6		0	3	2	−2

(a) At midnight the temperature is −6 °C.
By 0400 it has risen by 4 degrees.

What is the temperature at 0400?

.... °C   [1]

(b) Write down the highest temperature shown in the table.

.... °C   [1]

(c) By how much does the temperature fall between 1600 and 2000?

.... °C   [1]

(d) On Thursday the temperature at 1200 is 7 °C higher than the temperature at 2000 on Wednesday.

Write down the temperature at 1200 on Thursday.

.... °C   [1]

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6 The number of people travelling on nine buses is listed below.

| 11 | 3 | 11 | 17 | 21 | 11 | 19 | 24 | 18 |

Write down

(a) the range,

....

(b) the mode,

....

(c) the median,

....

(d) the total number of people travelling on the nine buses,

....

(e) the mean.

....

7 The diagram below is not drawn accurately. The area of rectangle *A* is 14 cm².

7 cm

A

2 cm

2 cm

NOT TO SCALE

9 cm

4 cm

1 cm
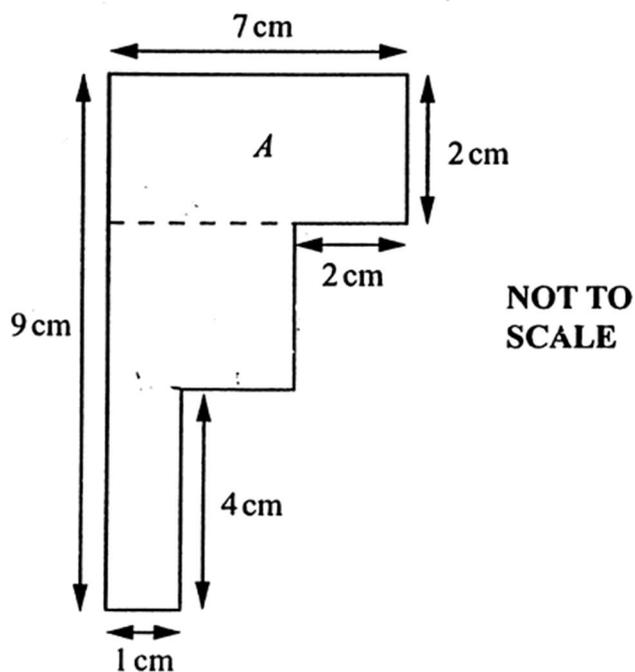
(a) Work out the length of the dotted line in the diagram.

.... cm   **[1]**

(b) Work out the area of the whole shape.

.... cm²   **[2]**

(c) Work out the perimeter of the shape.

.... cm   **[2]**

8 (a) A holiday costing €540 is offered at a discount of 25%.

Work out the **new** price of the holiday.

€ .... [2]

(b) Kwame invests €1000 at 6% interest per year.

Work out the **total value** of his investment after one year.

€ .... [2]
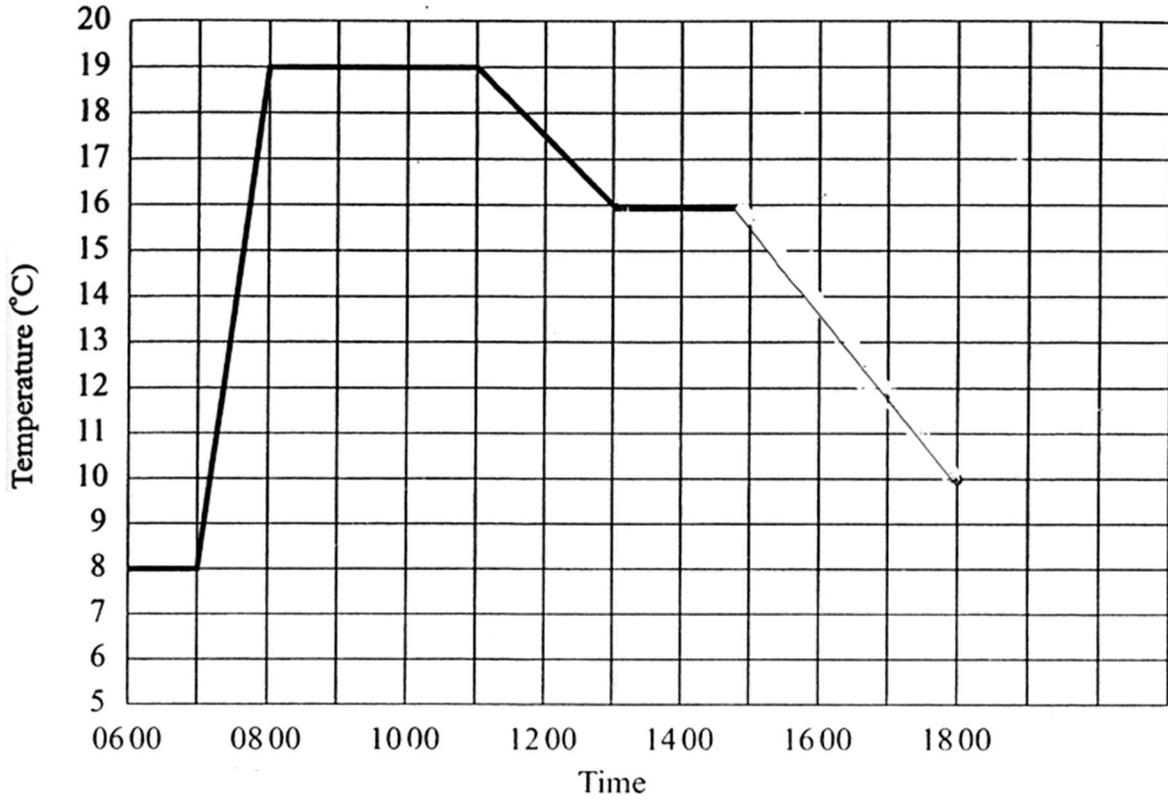
(c) Shona is buying a new car that has a price of €8500.
She pays a deposit of €1700.

Work out what percentage of the price she pays as a deposit.

.... % [2]

9 The graph shows the temperature in a room during the day.

(a) What is the temperature at 07 00?

.... °C   [1]

(b) For how long is the temperature at 19 °C?

.... hours   [1]

(c) By how many degrees does the temperature fall between 11 00 and 13 00?

.... [1]

(d) From 13 00, the temperature remains constant for 2 hours then falls to 10 °C at 18 00.

Complete the graph to show this information.

[2]

[Turn over

10 Solve the following equations.

(a) $2q + 7 = 13$

$q = $ .... [2]

(b) $3r - 5 = r - 1$

$r = $ .... [3]