Cambridge Checkpoint

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge Checkpoint

CANDIDATE NAME

CENTRE NUMBER | | | | | |

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MATHEMATICS **1112/01**

Paper 1 **For Examination from 2012**

SPECIMEN PAPER

1 hour

Candidates answer on the Question Paper.

Additional Materials: Geometrical Instruments
Tracing Paper

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on the work you hand in.
Write in dark blue or black pen.
You may use a pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer all questions.
NO CALCULATOR ALLOWED.

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

For Examiner's Use	
1	
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12	
Total	

This document consists of **12** printed pages.

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[Turn over

For Examiner's Use

1 **(a)** Work out.

(i) $483.7 \div 100$

..... [1]

(ii) 9.27×0.1

..... [1]

(iii) $15.06 \div 0.001$

..... [1]

(b) Write 276.5246

(i) correct to two decimal places

..... [1]

(ii) correct to two significant figures.

..... [1]

For Examiner's Use

2 **(a)** Write $\frac{23}{6}$ as a mixed number.

..... [1]

(b) Work out $\frac{1}{8}$ of 96

..... [1]

(c) Complete each statement with the correct symbol.

$=$ $<$ $>$

(i) 70% $\square$ $\frac{7}{10}$ [1]

(ii) $\frac{15}{100}$ $\square$ $\frac{1}{5}$ [1]

For Examiner's Use

3 **(a)** Work out 304.7 – 156.2

..... [1]

(b) Work out 12.5 ÷ 7
Give your answer correct to two decimal places.

..... [2]

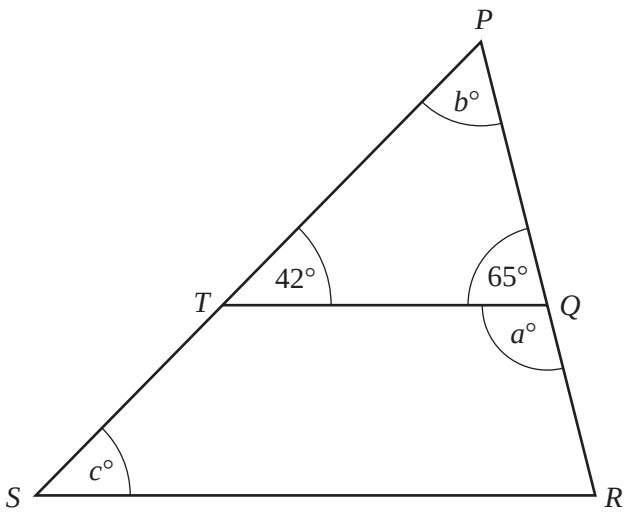
(c) Carlos has 4.5 m of cable.
He uses a 1.65 m piece and a 2.08 m piece.

Work out how much cable Carlos has left.

..... m [2]

For Examiner's Use

4 In the diagram, *PRS* is a triangle and *QT* is parallel to *RS*.



NOT TO SCALE

(a) Work out the sizes of angles *a* and *b*.

(i) $a =$ ..... [1]

(ii) $b =$ ..... [1]

(b) Work out the size of angle *c*.
Give a reason for your answer.

$c =$ ..... because ..... [2]

For Examiner's Use

5 **(a)** Work out.

(i) 0.6×9

..... [1]

(ii) 6.14×0.4

..... [1]

(b) Use the fact that

$57.2 \times 13.15 = 752.18$

to **write down** the answers to the following.

(i) 572×1315

..... [1]

(ii) $75.218 \div 57.2$

..... [1]

(c) Here is part of Naomi's maths homework.

$342 \times 0.96 = 382.32$

Naomi's answer is wrong.

Explain how you can tell she is wrong **without** working out the correct answer.

.....

..... [1]

For Examiner's Use

6 Here are the heights, given to the nearest centimetre, of a group of 13-year-old boys.

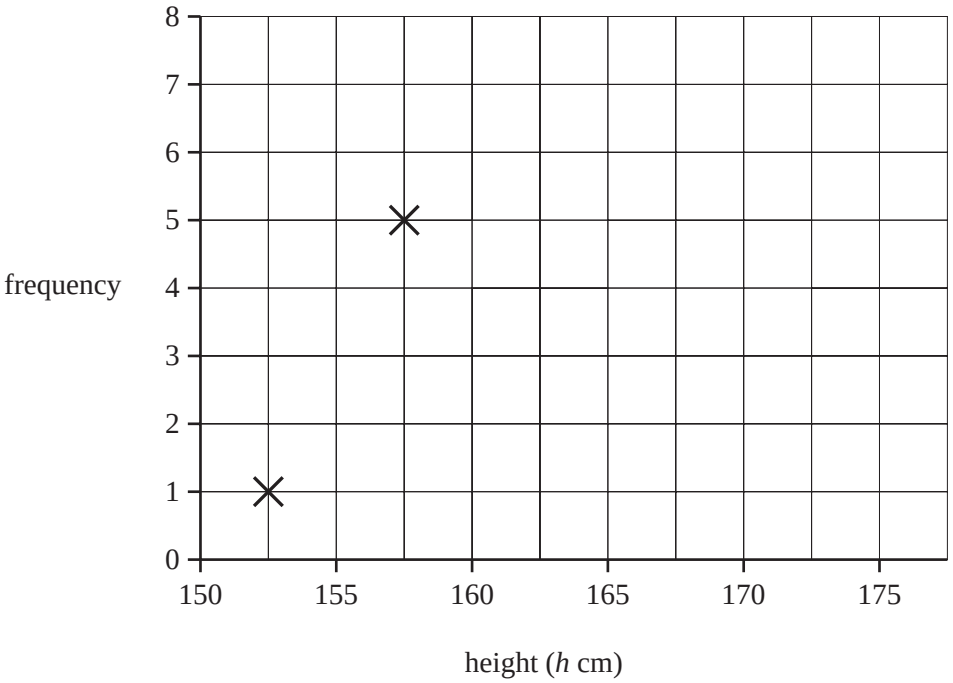
156	164	174	166	156	158	168	165
159	152	171	164	161	160	162	161

(a) Complete the frequency table to summarise the heights of the boys.

Height (h cm)	Tally	Frequency
$150 < h \leq 155$		
$155 < h \leq 160$		
$160 < h \leq 165$		
$165 < h \leq 170$		
$170 < h \leq 175$		

[2]

(b) Complete the frequency polygon to summarise the heights of the boys.



[2]

For Examiner's Use

7 **(a)** Complete these statements.

(i) 2584 centimetres = ... metres [1]

(ii) 5.6 tonnes = ... kilograms [1]

(b) The distance from London to Birmingham is about 100 miles.

Approximately how many kilometres is it from London to Birmingham?

..... kilometres [1]

(c) A jug contains 1.6 litres of milk.
Simon divides the milk equally between 8 glasses.

Work out how much milk is in each glass.
Give your answer in millilitres.

..... millilitres [2]

For Examiner's Use

8 **(a)** Simplify $3a + 4a - a$

..... [1]

(b) Factorise $2b^2 - 5b$

..... [1]

(c) Solve these equations.

(i) $6x = 18$

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

(ii) $5x = 4 - 3x$

$x =$ ..... [2]

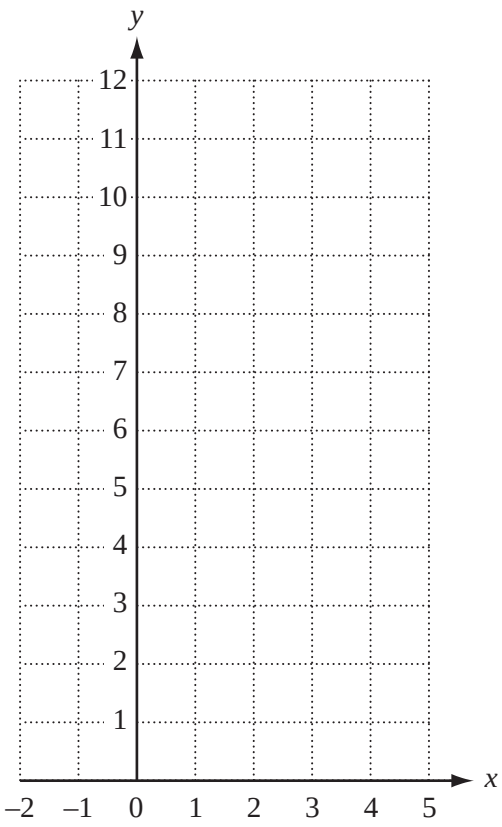
For Examiner's Use

9 **(a)** Complete this table of values for $y = 8 - 2x$

x	–1	0	2	4
y	10			0

[1]

(b) Use your table to draw the graph of $y = 8 - 2x$



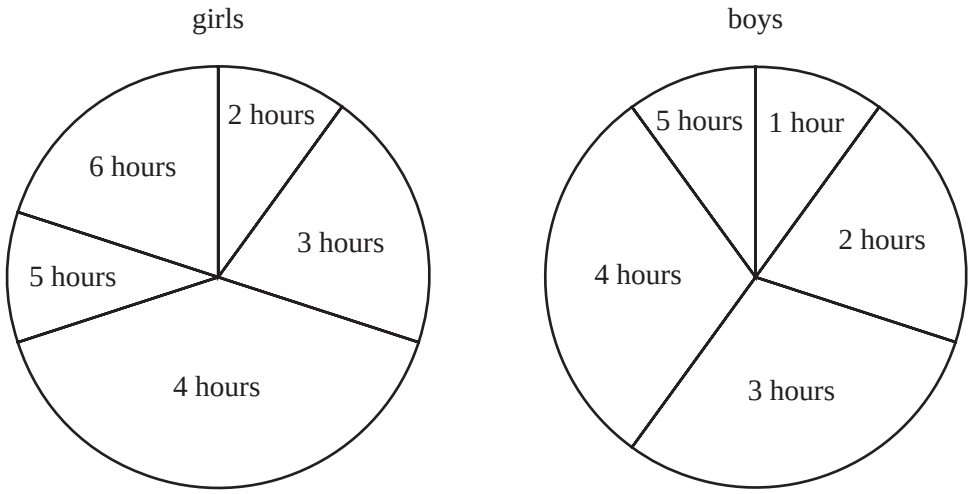
[2]

(c) The line L passes through the point (1, 2).
The gradient of line L is 3.

Draw line L on the grid. [2]

For Examiner's Use

10 A group of students is asked how long they spend doing homework.
The pie charts summarise the results.



Use the pie charts to decide whether each statement is true, false or there is not enough information to decide.

Give a reason for each choice.

(a) All of the boys spend less than 6 hours doing homework.

True ☐ False ☐ Not enough information ☐

Reason ..... [1]

(b) The total number of boys is the same as the total number of girls.

True ☐ False ☐ Not enough information ☐

Reason ..... [1]

(c) The boys' mode is 6 hours.

True ☐ False ☐ Not enough information ☐

Reason ..... [1]

For Examiner's Use

11 (a) Using **only** these numbers, complete the statements.

3 5 6 24 30 60

(i) ..... and ..... are factors of 12. [1]

(ii) ..... and ..... are multiples of 15. [1]

(b) Work out.

(i) $\sqrt[3]{125}$

..... [1]

(ii) 2^4

..... [1]

(iii) 5^0

..... [1]