



**Cambridge  
Checkpoint**

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
Cambridge Checkpoint

CANDIDATE  
NAME

CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**MATHEMATICS**

Paper 2

**1112/02**

**April 2012**

**60 minutes**

Candidates answer on the Question Paper.

Additional Materials: Geometrical Instruments  
Tracing paper  
Calculator

**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.

**DO NOT WRITE IN ANY BARCODES.**

Answer all questions.

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	
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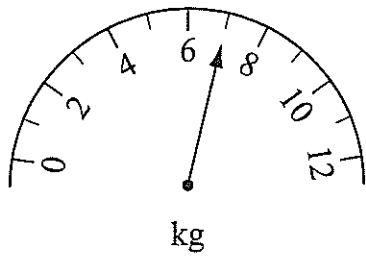
This document consists of 13 printed pages and 3 blank pages.





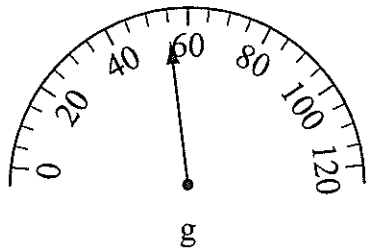
1 Write the mass shown on each scale.

(a)



..... kg [1]

(b)



..... g [1]

2 Write the following numbers in order, starting with the smallest.

0.395

0.4

0.38

0.3

0.388

.....

smallest

largest [1]

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3 (a) Work out 35% of \$275

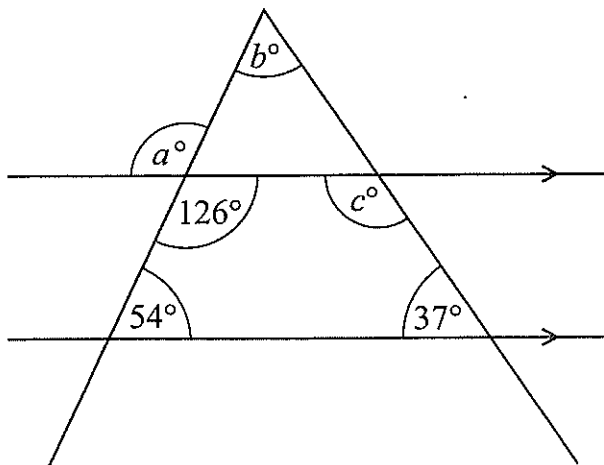
\$ ..... [2]

(b) A shopkeeper buys a dress for \$40  
She sells it for \$48

Work out the percentage increase in the price of the dress.

..... % [2]

4 Work out the values of  $a$ ,  $b$  and  $c$ .



NOT TO SCALE

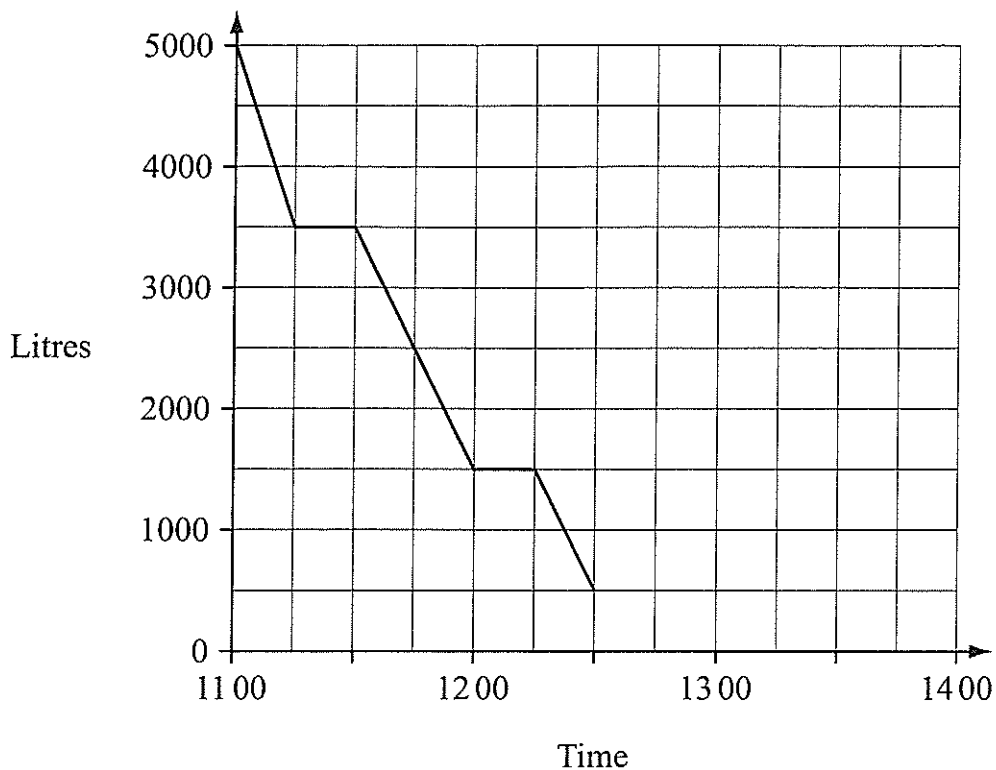
$a =$  ..... [1]

$b =$  ..... [1]

$c =$  ..... [1]



- 5 A water tank holds 5000 litres of water when full.  
The graph shows the amount of water in the tank between 11 00 and 12 30.



- (a) At 11 00 the tank is full.  
Write down

- (i) how much water is **used** between 11 00 and 12 30.

..... litres [1]

- (ii) the time at which there is 2500 litres in the tank.

..... [1]

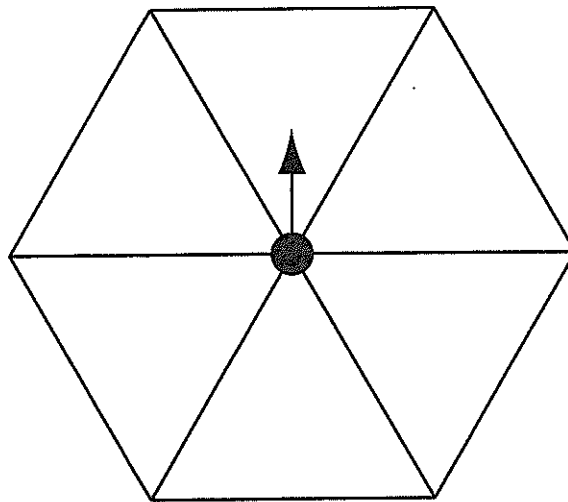
- (b) No water is used after 12 30.  
At 13 00 the tank is then refilled at a constant rate.  
It is full again by 13 45.

Show this information on the graph. [2]

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6 A fair spinner is in the shape of a regular hexagon.



(a) Write a number on each section so that the probability of getting an odd number is  $\frac{1}{3}$ .

[1]

(b) What is the probability of **not** getting an odd number?

..... [1]

7 The table shows information about the number of boys and girls in Class A and Class B.

Complete the table.

	Class A	Class B	Total
Boys	14		32
Girls		11	
Total	27		

[2]



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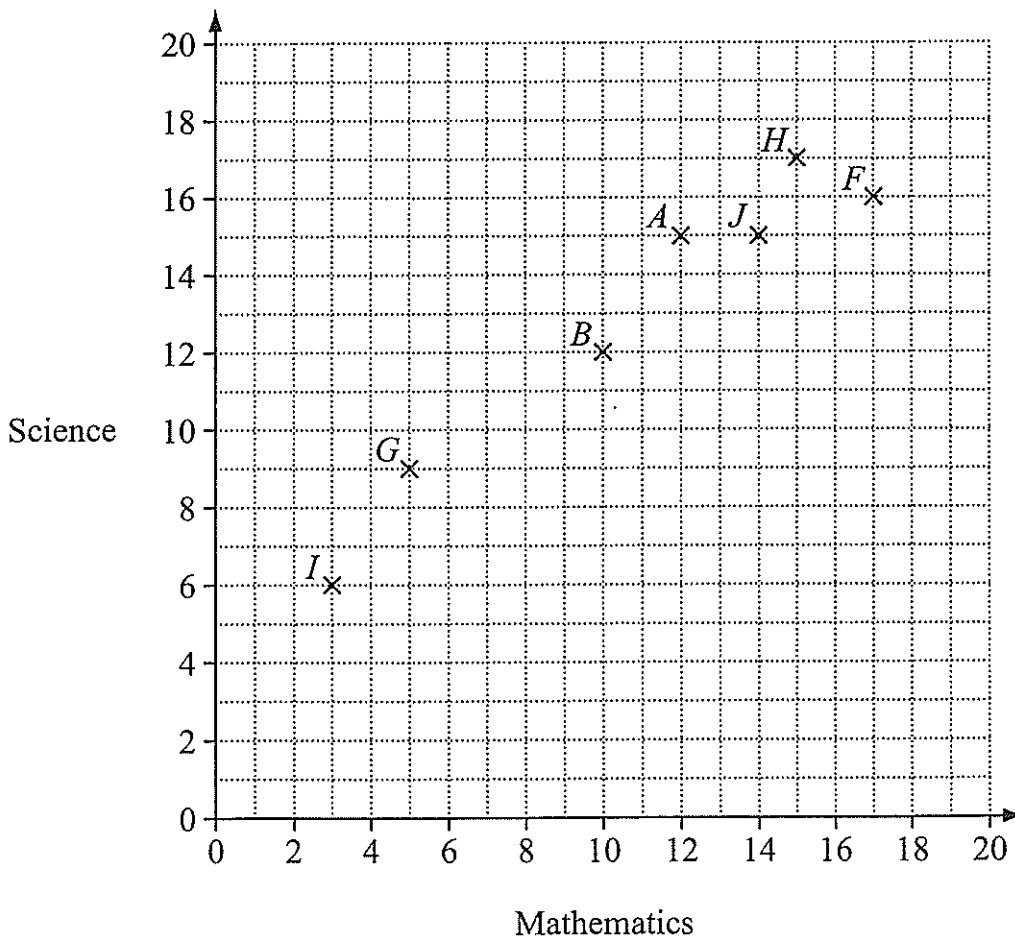
- 11 Ten students take tests in both mathematics and science. The table shows their test scores.

Student	A	B	C	D	E	F	G	H	I	J
Mathematics	12	10	19	8	18	17	5	15	3	14
Science	15	12	16	13	14	16	9	17	6	15

- (a) Calculate the mean score for mathematics.

..... [2]

- (b) Complete the scatter graph by showing the scores of students C, D and E.



[1]

- (c) Describe the correlation between the mathematics and the science scores.

..... [1]



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13 The graph of  $y = 3x - 2$  passes through the point  $(-1, a)$ .

(a) Work out the value of  $a$ .

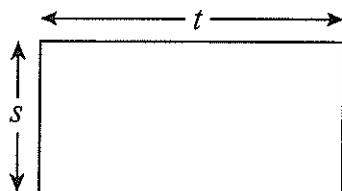
$a = \dots\dots\dots$  [1]

(b) The same graph passes through the point  $(b, b)$ .

Work out the value of  $b$ .

$b = \dots\dots\dots$  [2]

14 A rectangle has width  $s$  and length  $t$ .



NOT TO SCALE

(a) Write down a formula for the area  $A$  of the rectangle.

$A = \dots\dots\dots$  [1]

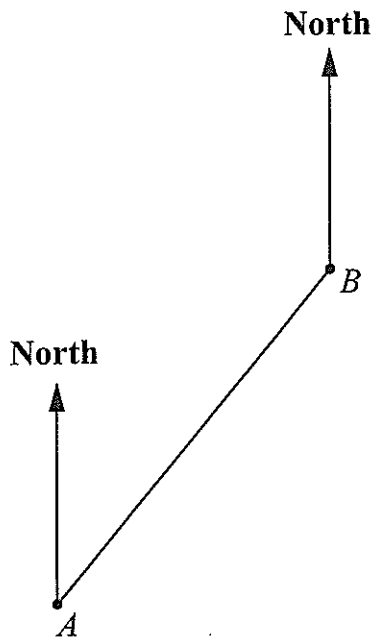
(b) The rectangle has an area of 42 units squared.  
Write down a formula for  $t$  in terms of  $s$ .

$t = \dots\dots\dots$  [1]



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15 The diagram, which is drawn accurately, represents the path taken by a walker.



(a) Measure and write down the bearing of *B* from *A*.

..... ° [2]

1 centimetre on the diagram represents 2 kilometres.

(b) (i) Measure and write down the distance from *A* to *B*.

..... cm [1]

(ii) Work out the actual distance in kilometres.

..... km [1]

At *B* the walker turns onto a bearing of  $125^\circ$ .  
He walks a further 11 km to a point *C*.

(c) On the diagram above, plot this journey from *B* to *C*.  
Label clearly the point *C*.

[2]

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