



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
Cambridge Checkpoint

CANDIDATE  
NAME

CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**MATHEMATICS**

**1112/01**

Paper 1

**April/May 2011**

**1 hour**

Candidates answer on the Question Paper

Additional Materials: Geometric instruments

**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.

**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.

This document consists of 11 printed pages and 1 blank page.





1 Sunil buys a DVD player with a 24-hour clock.

(a) He sets the DVD clock at 8.30 pm.

Write this time using the 24-hour clock.

..... [1]

(b) Sunil watches a film.

(i) When the film starts the clock shows 19 48.

Write this time using the 12-hour clock.

..... [1]

(ii) When the film ends the clock shows 21 26.

Work out the length of the film.

..... hours ..... minutes [1]

(c) Sunil goes to bed 45 minutes after the film ends.

Write down the time he goes to bed.

..... [1]



2 (a) The three angles of a triangle are  $2x^\circ$ ,  $3x^\circ$  and  $5x^\circ$ .

Work out the value of  $x$ .

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

(b) Find the value of  $3q - pr$  when  $p = -2$ ,  $q = 4$  and  $r = 3$ .

..... [3]



- 3 (a) John writes 128 words in 4 minutes.  
Work out his writing speed in words per minute.

..... words per minute [1]

- (b) Sam is filling an empty water tank.  
The tank holds 400 litres when full.  
The tank fills at a rate of 8 litres per minute.

How long does it take to fill the tank?

..... minutes [1]

- (c) A paper aeroplane travels 49 metres in 7 seconds.

Work out the speed of the aeroplane in

- (i) metres per second,

..... m/s [1]

- (ii) kilometres per hour.

..... km/h [2]



4 (a) A bag of apples has a mass of 2.3 kg and costs \$1.50.

(i) Work out the mass of five bags of apples.

..... kg [1]

(ii) What is the cost of seven bags of apples?

\$ ..... [1]

(iii) Work out how many bags of apples you can buy for \$13.50.

..... bags [1]

(b) Oliver buys nine bags of oranges for \$11.25.  
Work out the cost of one bag of oranges.

\$ ..... [1]

(c) Josie spends \$2.75 on bananas.  
Mili spends \$4.35 on a bag of peaches.

How much more does Mili spend than Josie?

\$ ..... [1]



5 Look at this list of dawn temperatures measured in °C.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4		-3		-4		5

(a) Complete the table to show the following information.

- (i) The dawn temperature on Monday is 5 °C lower than on Sunday.  
Write down the dawn temperature on Monday. [1]
- (ii) The dawn temperature on Wednesday is 4 °C higher than on Tuesday.  
Write down the dawn temperature on Wednesday. [1]
- (iii) The dawn temperature on Friday is 2 °C higher than on Thursday.  
Write down the dawn temperature on Friday. [1]

(b) By midnight on Saturday the temperature had fallen to -3 °C.  
By how many degrees had the temperature fallen since dawn on Saturday?

..... [1]



6 (a) A meal costs \$30 plus a 10% service charge.

Work out the **total** cost of this meal.

\$ ..... [2]

(b)



Find the sale price of a television that normally costs \$250.

\$ ..... [2]

(c)



Work out the **total** price of the computer.

\$ ..... [2]



7 There are 60 books on a shelf.

- (a) 20% of the books are new.  
Write 20% as a fraction in its simplest form.

..... [2]

- (b) 75% of the books are about science.  
How many science books are on the shelf?

..... [1]

- (c) Five of the books on the shelf have blue covers.  
Three of these books are French.

What percentage of blue covered books are French books?

..... % [2]





8 Mercedes rolls a six-sided die thirty times. She records her results.

3	5	4	3	3	6	4	3	1	4
3	1	5	6	4	1	2	4	3	2
6	5	2	6	4	6	4	5	3	3

(a) Complete the frequency column of her table.

Number	Frequency	
1		
2		
3		
4		
5		
6		
Total 30		

[2]

(b) (i) Write down the mode.

..... [1]

(ii) Write down the median.

..... [1]

(iii) Work out the mean.

..... [2]



- 9 (a) Two sisters share some sweets.  
Mira receives four times as many as Farah.

Write this information as a ratio.

..... : ..... [1]

- (b) Three brothers share \$100 in the ratio of their ages.  
John is nine, Koffi is six and Gary is five years old.

Work out how much Koffi receives.

\$ ..... [2]

- (c) Two friends share some money in the ratio 5 : 4.  
The smaller share is \$200.

Work out the **total** amount of money they share.

\$ ..... [2]



0 (a) Look at this list of numbers.

- 3
- 0
- 2
- 5
- 8

Write down all of the numbers from the list that satisfy each inequality.

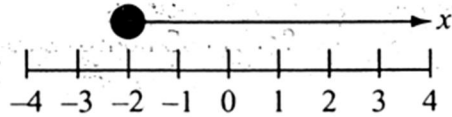
(i)  $x > 4$

..... [1]

(ii)  $x \leq 0$

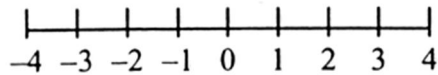
..... [1]

(b) Write down the inequality shown on the number line below.



..... [1]

(c) Show the inequality  $0 < x < 3$  on the number line below.



[2]