UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge Checkpoint
Pretest

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

MATHEMATICS

Paper 2

Pretest 1112/02

April/May 2010

1 hour

Candidates answer on the Question Paper

Additional Materials: Geometrical 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 pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO NOT WRITE IN ANY BARCODES.

Answer all questions.
NO CALCULATORS 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 52.

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

1 Ayesha visits the cinema each week.

(a) She catches the 6.30 pm bus.

(i) Write 6.30 pm using the 24-hour clock.

..... [1]

(ii) The journey to the cinema takes 53 minutes.
At what time does she arrive at the cinema?

..... [1]

(b) In the first week the film starts at 7.45 pm and ends at 10.05 pm.

Work out how long the film lasts.
Give your answer in hours and minutes.

..... hours ..... minutes [2]

(c) In the second week she goes to see a programme of 8 short cartoons.
Each cartoon lasts for 13 minutes.

Work out the total length of the programme.
Give your answer in hours and minutes.

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

(d) In the third week the programme of 8 cartoons lasts for 1 hour 36 minutes.
Each cartoon lasts for the same length of time.

Work out how long each cartoon lasts in this programme.

..... minutes [1]

2 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?

..... [1]

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

Work out the total cost of this meal.

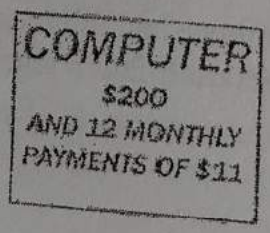
$ ..... [2]

(b)

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

$ ..... [2]

(c)



Work out the total price of the computer.

$ ..... [2]

4 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]

5 (a) On Day 1 a factory produces 1450 cars.
290 cars are white.

What percentage of the cars produced are white?

..... % [2]

(b) One of the cars contains 3 litres of fuel.
Its fuel tank is 5% full.

Work out how much fuel the tank holds when it is full.

..... litres [2]

(c) On Day 2, 30% fewer cars are produced.
Work out how many cars are produced on Day 2.

..... cars [2]

6 A football team scores 55 goals during a season.

(a) Tipesh scores ten of these goals.

Write this information as a percentage of the total goals scored.
Give your answer to the nearest whole number.

..... [2]

(b) The number of goals scored during this season is 10% more than last season.
Work out how many goals were scored last season.

..... goals [2]

(c) Last season Yusif scored five goals.
This season he scored eight goals.

Work out the percentage increase in goals he scored.

..... % [2]

7 (a) Put the following numbers in order, starting with the smallest.

0.395 0.4 0.38 0.3 0.388

0.3 ....

smallest largest [2]

(b) Complete each of the following statements using one of the following symbols.

> = <

(i) -7 ..... -8 [1]

(ii) $\frac{1}{4}$ ..... 0.25 [1]

(iii) 2^2 ..... 5 [1]

8 (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,

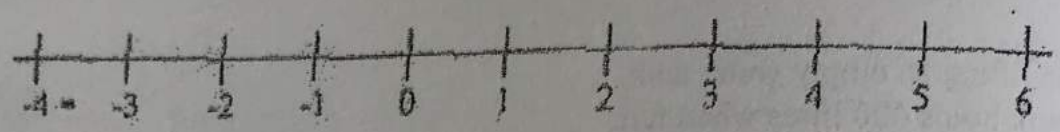
..... m/s [1]

(ii) kilometres per hour

..... km/h [2]

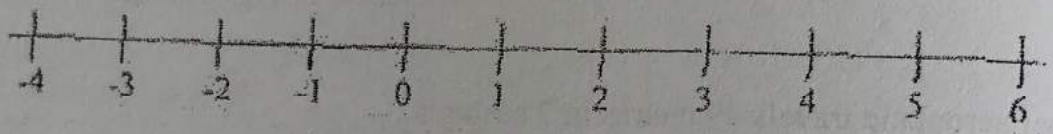
9 (a) Draw these inequalities on the number lines below.

(i) $p < 4$



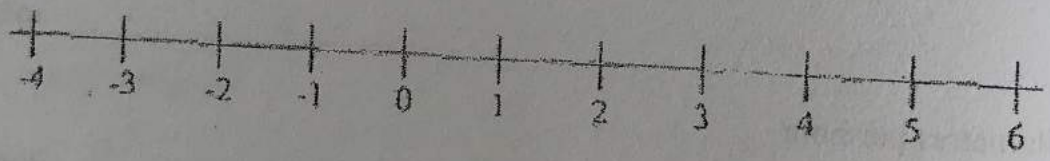
[1]

(ii) $q \geq -2$



[1]

(iii) $2 < r \leq 5$



[2]

(b) Put a ring around the correct integer solutions to the following inequality.

$$4 < 2b \leq 8$$

1, 2, 3, 4 2, 3, 4 3, 4 4, 5, 6, 7, 8 [1]

10 A bag contains 25 balls.
There are 7 red balls, 5 green balls, 10 blue balls and 3 yellow balls.
Without looking, a ball is taken at random from the bag.

Work out the probability that

(a) the ball is red,

..... [1]

(b) the ball is green or yellow,

..... [1]

(c) the ball is not blue,

..... [1]

(d) the ball is white.

..... [1]