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Cambridge Checkpoint

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge Checkpoint

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

* 0 7 4 1 9 4 0 0 9 7 *

**MATHEMATICS** **1112/01**

Paper 1 **April 2012**

**60 minutes**

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 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.
**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 | |
|---|---|
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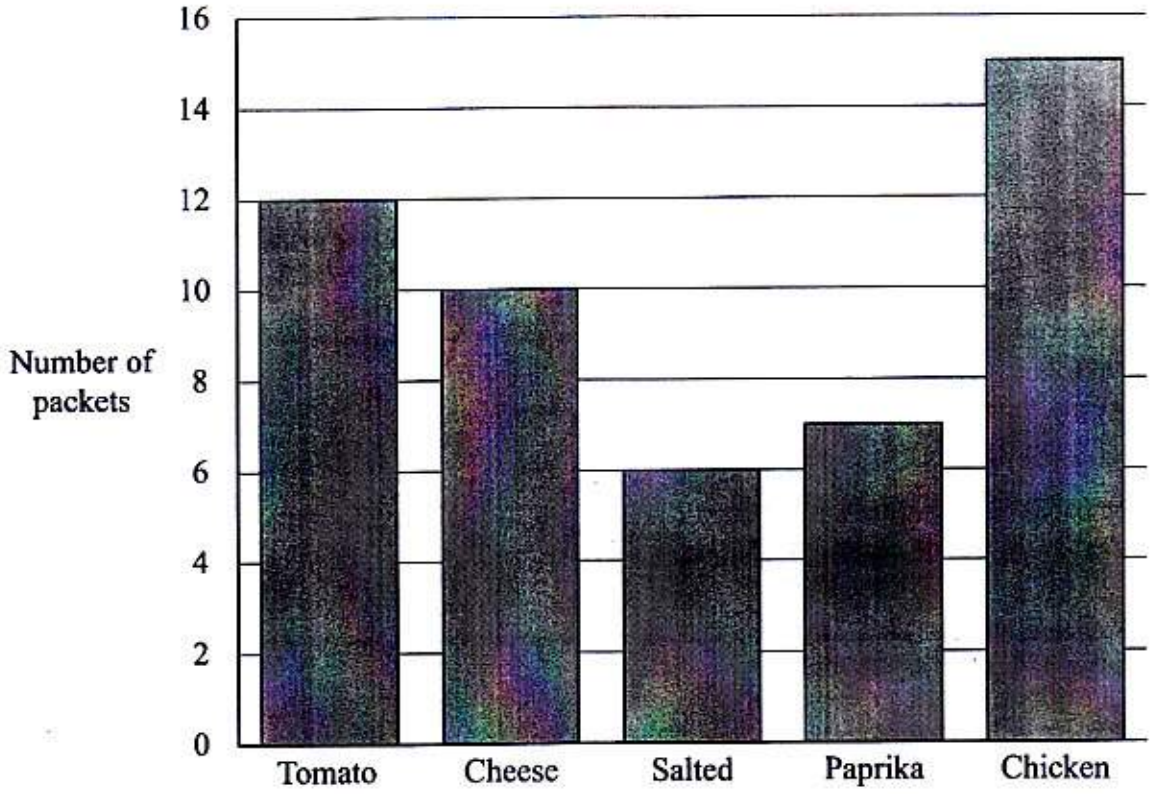
| Total | |

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




UNIVERSITY of CAMBRIDGE International Examinations

1 This graph shows the number of packets of crisps that were sold in one week.




**(a)** How many more packets of Cheese were sold than packets of Paprika crisps?

.....

[1]

**(b)** Which flavour was twice as popular as Salted?

.....

[1]

2 **(a)** At 10 pm the temperature is 2 °C.
At midnight the temperature has fallen by 3 °C.

What is the temperature at midnight?

..... °C [1]

**(b)** The temperature in a freezer is −15 °C.
The temperature in the freezer increases by 3 °C.

Work out the temperature in the freezer now.

..... °C [1]

3 A recipe lists the ingredients needed to make 24 cakes.

| | |
|---|---|
| 100 g | Flour |
| 50 g | Margarine |
| 50 g | Sugar |
| 1 | Egg |

**(a)** Joanna makes 48 cakes.

Work out how much flour she needs.

..... g [1]

**(b)** Luca has 7 eggs and plenty of the other ingredients.

Work out the maximum number of cakes he can make.

..... cakes [1]

4 Choose one of these words to complete each sentence.

Certain Likely Unlikely Impossible

It is ..... that the day after Wednesday is Sunday.

My teacher chooses a number between one and one hundred.

It is ..... that I will guess the number correctly. [1]

5 A package is delivered 3 hours 25 minutes after it is collected.
It is collected at 1539.

At what time is the package delivered?

..... [1]

6 Here is a formula.

$$a = 2b - c$$

Find the value of $a$ when

(a) $b = 11$ and $c = 3$

..... [1]

(b) $b = 12$ and $c = -4$

..... [1]

7 Tido is shopping at a furniture store.

**(a)** He has \$360 to spend.
He buys a table for \$204.99

Work out how much money he has left after buying the table.

\$ ..... [1]

**(b)** Work out the cost of 4 mirrors at \$35.99 each.

\$ ..... [1]

**(c)** A bed costs \$560.
The price is reduced by 25% in a sale.

Work out the **sale price** of the bed.

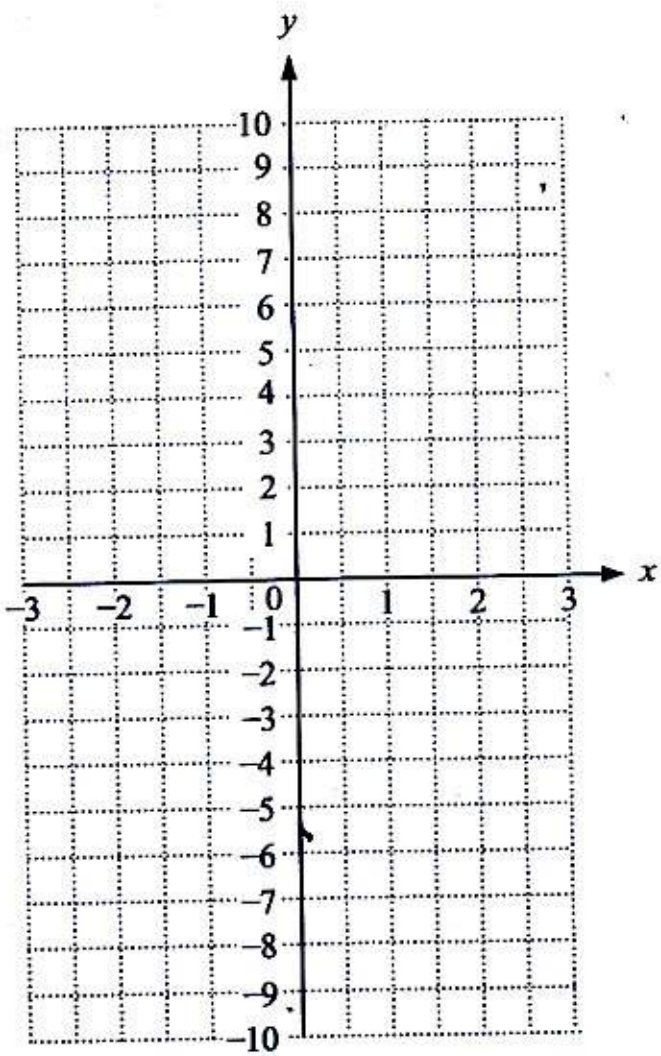
\$ ..... [2]

8 (a) Complete this table of values for the graph $y = -4x - 2$

| $x$ | $-2$ | $-1$ | 0 | 1 | 2 |
|---|---|---|---|---|---|
| $y$ | 6 | 2 | | $-6$ | |

[1]

(b) Use your table of values to draw the graph of $y = -4x - 2$




[1]

9 Complete the following statements.

(a) 0.75 m = ..... cm [1]

(b) 1.357 kg = ..... g [1]

(c) 4000 kg = ..... tonnes [1]

(d) $2.5\,m^2$ = ..... $cm^2$ [1]

10 Complete this table of equivalent fractions, decimals and percentages.

The first row is done for you.

| Fraction | Decimal | Percentage |
|---|---|---|
| $\frac{3}{8}$ | 0.375 | 37.5 % |
| | | 43 % |
| | 0.09 | |

[2]

11 Work out

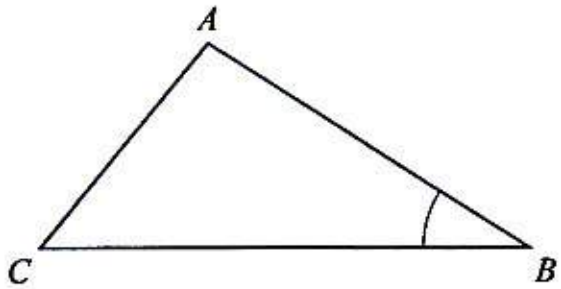
(a) $2.59 \times 0.4$

..... [1]

(b) $44.4 \div 1.2$

..... [1]

**12** The sketch shows a triangle $ABC$.



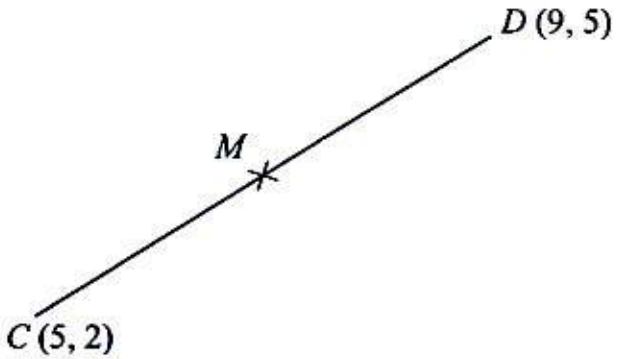

$AB = 7$ cm, $CB = 10$ cm and angle $ABC = 32°$.

Draw triangle $ABC$ accurately.

The line $CB$ has been drawn accurately for you.

$C$ ——————————————— $B$ [2]

13 Chaz draws a line $CD$.




Point $C$ has the co-ordinates (5 , 2).
Point $D$ has the co-ordinates (9 , 5).
Point $M$ is the midpoint of the line $CD$.

Work out the co-ordinates of the point $M$.

$M = ($ ..... , ..... $)$ [2]

14 **(a)** Write down all the factors of 18

..... [1]

**(b)** Write 54 as a product of its prime factors.

..... [2]

15 Use the information that

$$22.1 \times 32.5 = 718.25$$

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

**(a)** $22.1 \times 325 =$ ..... [1]

**(b)** $718.25 \div 22.1 =$ ..... [1]

**(c)** $2.21 \times 3.25 =$ ..... [1]

**(d)** $718.25 \div 3.25 =$ ..... [1]

**(e)** $2210 \times 325 =$ ..... [1]

16 (a) Write the ratio 8 : 12 in its simplest form.

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

(b) On a school trip the ratio of adults to children is 1 : 6
There are 30 children on the trip.

Work out the number of adults.

..... adults [1]

17 Work out the following.
Give your answers as fractions in their simplest form.

(a) $\frac{5}{8} \times \frac{4}{15}$

..... [2]

(b) $1\frac{2}{3} + 2\frac{2}{9}$

..... [2]

**18** Solve the simultaneous equations.

$$7x + 2y = 31$$
$$3x + 2y = 19$$

$x =$ .....

$y =$ ..... [3]

**19** **(a)** Work out

$$4.2 + 5 \times 1.1$$

..... [1]

**(b)** Put **one pair** of brackets in this calculation to make it correct.

$$18 \div 6 + 3 \times 7 = 14$$ [1]

**20** Given that $x$ is a whole number, work out the values of $x$ which satisfy this inequality.

$$4 < 2x \leq 8$$

Put a ring around the correct answer.

3 2, 3 2, 3, 4

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

**21** A spinner contains five sections numbered 1 to 5.
It is **not** a fair spinner.

Josef makes a table to show the probabilities of the spinner landing on each of the numbers 1 to 5.

| **Number** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Probability** | 0.4 | | 0.2 | 0.1 | |

The probability that the spinner lands on 2 is **half** the probability that it lands on 5.

Complete the table to show all of the probabilities. [2]