

CANDIDATE  
NAME

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CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**MATHEMATICS**

**0845/02**

Paper 2

**October 2017**

**45 minutes**

Candidates answer on the Question Paper.

Additional Materials:

Pen  
Pencil  
Ruler

Protractor  
Calculator  
Tracing Paper (optional)

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name in the spaces at the top of this page.  
Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

Calculator allowed.

The number of marks is given in brackets [ ] at the end of each question or part question.

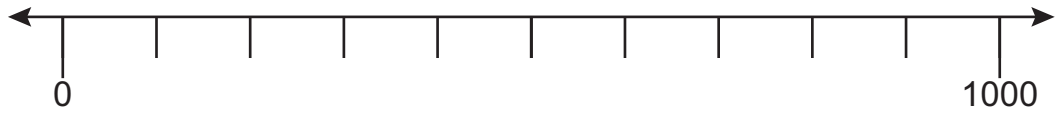
You should show all your working in the booklet.

The total number of marks for this paper is 40.

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



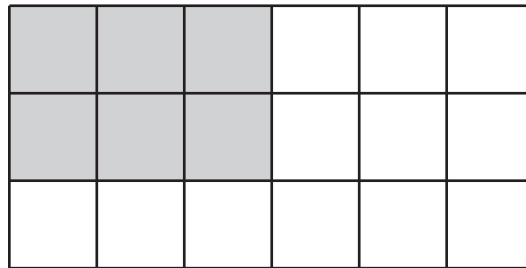
1 Here is part of a number line.



Draw an arrow (↓) to show the position of 350

[1]

2 (a) What fraction of this shape is shaded?



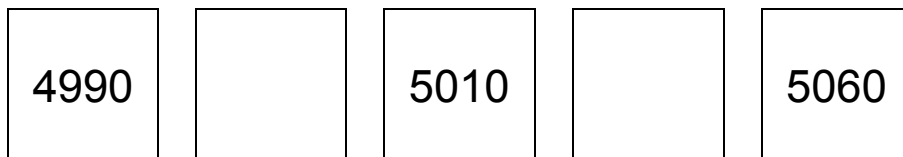
..... [1]

(b) Three **more** squares are shaded.

What fraction of the shape is now shaded?

..... [1]

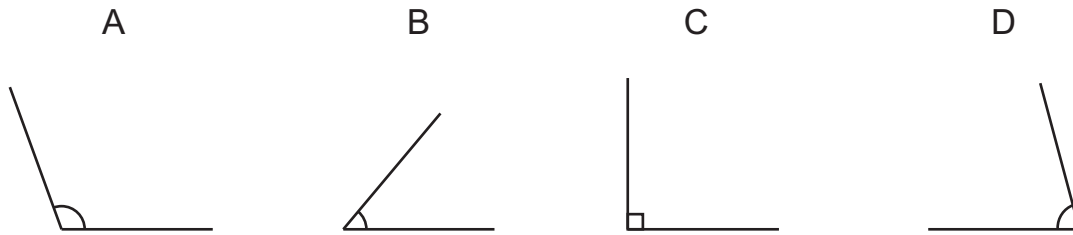
3 Here is a row of five cards.  
Two of the cards are blank.



Write a number on each blank card.  
The five numbers must be in order.

[1]

4 Here are four angles.



Write the letters for the angles to complete this mathematical sentence.

$$\square < \square < \square < \square$$

[2]

5 Ahmed sells fruits.  
He keeps a tally of his sales one day.

Fruit	Tally	Frequency
Oranges		24
Pineapples		
Melons		
Bananas		9

(a) Complete the frequency column.

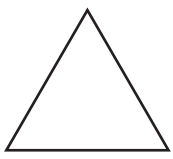
[1]

(b) Ahmed draws a bar chart to show the information.  
He uses a scale of 1 centimetre for every 2 pieces of fruit.

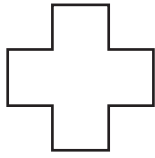
How many centimetres high will the bar be for bananas?

..... cm [1]

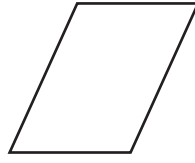
6 Here is a sequence.



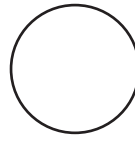
1st



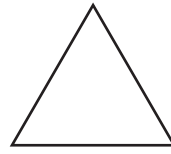
2nd



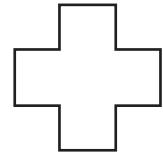
3rd



4th



5th



6th

The sequence continues in the same way.

Draw a ring around the shape that will also be the 100th shape.

[1]

7 Here are 4 digits.

2

3

5

8

Put each digit into the diagram once to give the **highest** answer.

$$\boxed{\phantom{0}}\boxed{\phantom{0}}\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \text{highest answer}$$

[1]

8 What is the **difference** between the answers to these calculations?

$$(32.5 - 12.7) + 14.3$$

$$32.5 - (12.7 + 14.3)$$

Show your working.

..... [2]

- 9 A box holds 25 cans of soup.  
It costs \$9.75

How much does 1 can of soup cost?

\$ ..... [1]

- 10 Here is a recipe for cherry smoothies.

<p><u>Makes 2 smoothies</u></p> <p>100 ml cherry juice 200 ml soya milk 275 g cherry yogurt 75 g cherries</p>
---------------------------------------------------------------------------------------------------------------------------

- (a) Yuri makes 6 smoothies.

How much soya milk does he use?

..... ml [1]

- (b) Pierre uses 225 grams of cherries to make smoothies.

How much cherry yogurt does he use?

..... g [1]

11 Draw a line to join **each** number to the nearest whole number.

7.8	7
8.5	8
7.49	9
8.37	

[1]

12 This year Mr Nofal's age is a multiple of 8  
Next year Mr Nofal's age will be a multiple of 7

How old is Mr Nofal now?  
You must show your working.

..... years [2]

- 13 Anastasia has a box containing only red sweets and yellow sweets. It contains three times as many red sweets as yellow ones.

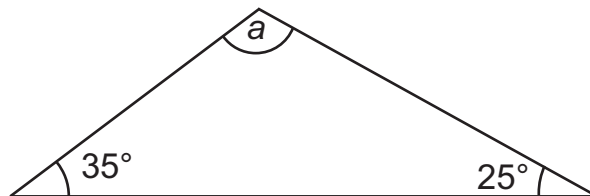
She takes a sweet without looking.

Draw lines to show how likely these outcomes are.

	impossible
Anastasia takes a red sweet.	unlikely
Anastasia takes a yellow sweet.	even chance
Anastasia takes a green sweet.	likely
	certain

[1]

- 14 Calculate the size of angle  $a$ .



Not drawn  
to scale

.....<sup>°</sup> [1]

- 15** A school has 80 students.  
20% of the students travel to school by bus.

How many students travel by bus?

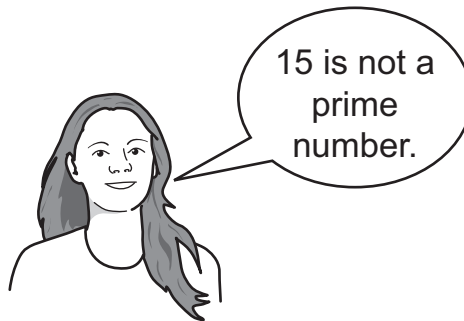
..... students [1]

- 16** Complete the subtraction calculation.

$$\begin{array}{r}
 \begin{array}{|c|c|c|} \hline 3 & 7 & \\ \hline \end{array} \\
 - \begin{array}{|c|c|c|} \hline 1 & & 5 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|c|c|} \hline & 2 & 8 \\ \hline \end{array}
 \end{array}$$

[2]

- 17** Gabriella says,



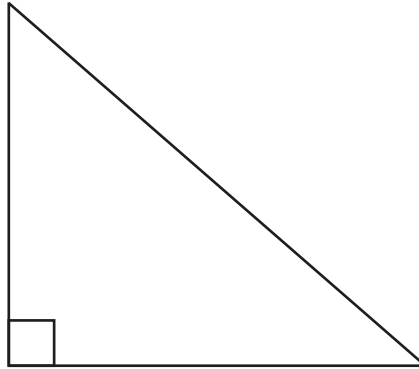
Explain why Gabriella is correct.

.....  
.....

[1]



18 Here is a right-angled triangle.



(a) Measure the shortest side in **centimetres**.

..... cm [1]

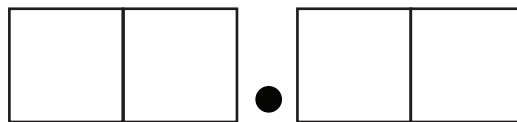
(b) Measure the longest side in **millimetres**.

..... mm [1]

19 Hassan has four digit cards.



He puts them onto this diagram.



He puts the 7 in the tenths place.

He puts the 1 in the units place.

Which number could he make to complete the diagram?

..... [1]

- 20** Manjit **and** five friends go to the cinema.  
Each ticket costs \$2.79

How much does it cost altogether?

\$ ..... [1]

- 21** Write < or > or = into the boxes to make each statement correct.

$$209.5 + 8.29 + 94.03 \quad \square \quad 51.97 \times 6$$

$$998.3 \div 6.7 \quad \square \quad 1001 - (549.4 + 302.67)$$

$$70.75 \times (3.93 + 1.37) \quad \square \quad 900 \div 2.4$$

[2]

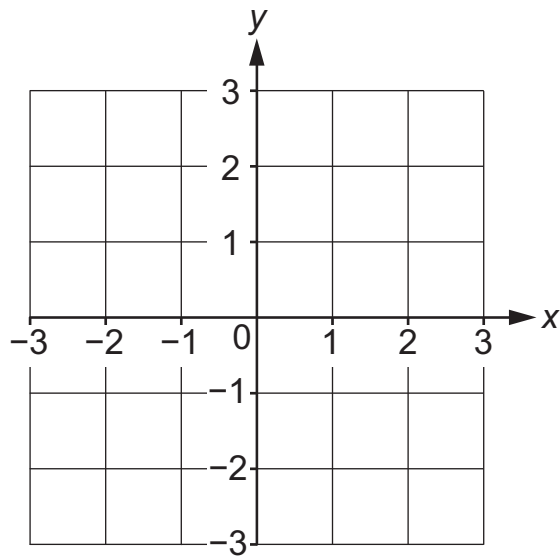
- 22** Aiko writes answers to calculations in a table.  
She writes each answer in two different ways.

Complete her table.

Calculation	Answer as a mixed number	Answer as a decimal
$25 \div 2$	$12 \frac{1}{2}$	12.5
$85 \div 4$		
$214 \div 5$		

[2]

23 Here is a co-ordinate grid.



(a) Plot points  $(-1, 3)$  and  $(2, -3)$  and join them with a straight line. [1]

(b) Give the whole number co-ordinates of another point on the line.

( ..... , ..... ) [1]

24 Chen has five number cards.

3

7

?

?

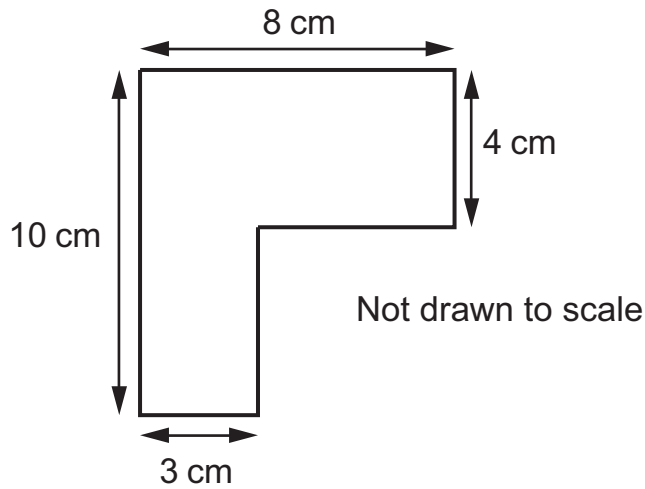
?

The mean of his five numbers is 4

What could Chen's other number cards be?

..... [2]

- 25** What is the area of this shape?  
Show your working.



..... cm<sup>2</sup> [2]

- 26**  $\frac{1}{3}$  of a number is equal to  $\frac{1}{2}$  of 90

What is the number?

..... [1]

- 27** Lily is thinking of a 3D shape.

It has: 4 faces  
4 vertices  
6 edges

What is the shape?

..... [1]

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