

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

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Forename(s)

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Candidate signature

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# GCSE MATHEMATICS

Grades 2-3

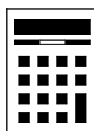
Calculator Test 2

Time allowed: 1 hour

## Materials

For this paper you must have:

- a calculator
- mathematical instruments.



## Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

## Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 47.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

## Advice

- In all calculations, show clearly how you work out your answer.

| For Examiner's Use |      |
|--------------------|------|
| Pages              | Mark |
| 2-3                |      |
| 4-5                |      |
| 6-7                |      |
| 8-9                |      |
| 10-11              |      |
| 12                 |      |
| <b>TOTAL</b>       |      |

Answer **all** questions in the spaces provided

- 1 (a) There are 1020 books in a box.

$\frac{2}{5}$  of the books are blue.

How many are blue?

[2 marks]

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Answer \_\_\_\_\_

- 1 (b) There are green pens and red pens in the box.

The ratio of green : red is 4 : 3

What fraction of the pens are green?

[1 mark]

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Answer \_\_\_\_\_

- 2 Solve  $\frac{c}{4} = 8$

[1 mark]

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$c =$  \_\_\_\_\_



- 3 The probability that A is the outcome of an experiment is 0.2

Circle the probability that A is **not** the outcome.

[1 mark]

0

0.2

0.5

0.8

- 4  $c > 4$        $d < 4$        $c - d = 6$

Work out a possible pair of values for  $c$  and  $d$ .

[2 marks]

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$c =$  \_\_\_\_\_  $d =$  \_\_\_\_\_

- 5 Here is a list of numbers.

10    8    2    11    12    15    4    4

Work out the range.

[1 mark]

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Answer \_\_\_\_\_

6

Here are two expressions.

$$8a$$

$$a^2 - b$$

When  $a = 25$  the expressions have the same value.Work out the value of  $b$ .**[3 marks]**

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$$b = \underline{\hspace{10cm}}$$

7

In this question use

$$1 \text{ cubic foot} = 6.23 \text{ gallons}$$

$$1 \text{ cubic foot} = 0.028 \text{ cubic metres}$$

Convert 3115 gallons into cubic metres.

**[3 marks]**

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$$\text{Answer } \underline{\hspace{10cm}} \text{ m}^3$$



- 8** Four positive whole numbers add up to 84  
One of the numbers is a multiple of 17  
The other three numbers are equal.  
What are the four numbers?

**[3 marks]**

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Answer \_\_\_\_\_

- 9** The term-to-term rule for a sequence is

add 20 then divide by 2

The 2nd term is 50

Work out the 1st term.

**[2 marks]**

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Answer \_\_\_\_\_



[illegible]

Answer \_\_\_\_\_



11

A reel holds 9.5 metres of ribbon.

2 pieces of ribbon are cut from the reel.

Each piece is 20 centimetres long.

What length of ribbon is left on the reel?

State the units of your answer.

[3 marks]

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Answer \_\_\_\_\_

12

Each shape below has an area of  $24 \text{ cm}^2$

Complete the missing lengths.

[3 marks]

Rectangle

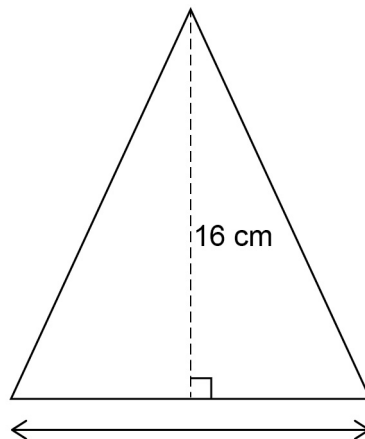


6 cm

\_\_\_\_ cm

Not drawn  
accurately

Triangle



16 cm

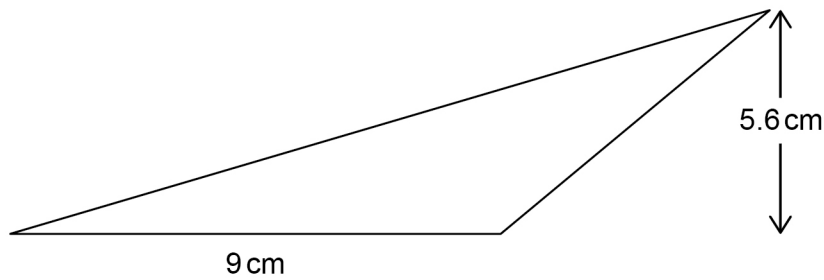
\_\_\_\_ cm

Turn over ►



13

A triangle has base 9 cm and perpendicular height 5.6 cm

Not drawn  
accurately

Work out the area of the triangle.

**[2 marks]**

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Answer \_\_\_\_\_  $\text{cm}^2$ 

14

Write down **all** the prime numbers between 40 and 50**[2 marks]**

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Answer \_\_\_\_\_

15

Jing has £2450

She saves some and gives the rest to her four brothers.

money saved : money given to brothers = 2 : 5

She gives each of her **four** brothers the **same** amount.

Does each brother receive more than £430 ?

You **must** show your working.**[4 marks]**


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16

Put these probabilities in order, starting with the least likely.

44%                   $\frac{1}{4}$                   0.404                   $\frac{4}{10}$

**[2 marks]**


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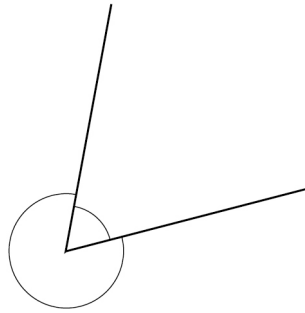
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Answer \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_



17

Two angles around a point are shown.



Not drawn  
accurately

The angles are in the ratio  $2 : 7$

Show that the larger angle is  $280^\circ$

**[2 marks]**

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18

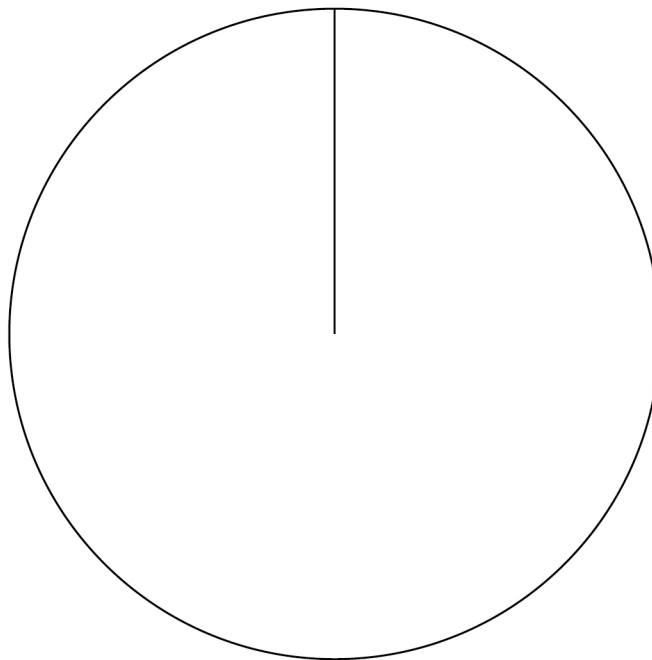
In one hour a shop sells 180 scoops of ice cream.

The number of scoops of each flavour is shown in the table.

| Flavour          | Vanilla | Strawberry | Chocolate | Mint |
|------------------|---------|------------|-----------|------|
| Number of scoops | 45      | 75         | 50        | 10   |

Complete the pie chart to represent the data.

[4 marks]




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- 19** The value of  $x$  can be 2 or 5  
The value of  $y$  can be 3 or 12

List the possible values of  $xy$

**[2 marks]**

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Answer \_\_\_\_\_

2

**END OF QUESTION**

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