

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

GCSE MATHEMATICS

Grades 2-3

Non-Calculator Test 2

Time allowed: 1 hour

Materials

For this paper you must have:

- mathematical instruments.



You must **not** use a calculator.

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 45.
- 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	
TOTAL	

Answer **all** questions in the spaces provided**1** Solve $3x - 8 = 19$ **[2 marks]**

 $x =$ _____**2 (a)** The term-to-term rule for a sequence is

multiply by 2

The 3rd term of the sequence is 46

Work out the 1st term.

Give your answer as a decimal.

[3 marks]

Answer _____



- 2 (b) The term-to-term rule for a different sequence is

subtract k

The 1st term is 34

The 4th term is 10

Work out the value of k .

[3 marks]

$k =$ _____

- 3 Work out 20% of 14 000

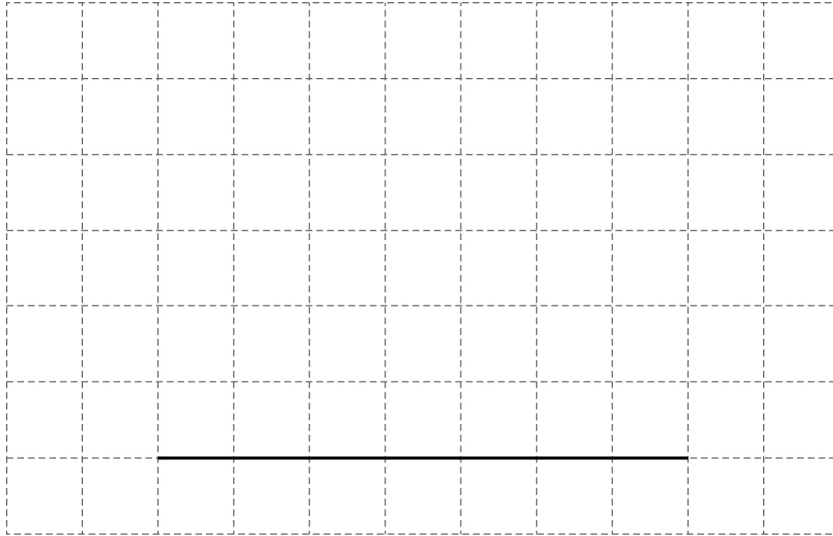
[2 marks]

Answer _____



4

One side of a rectangle is drawn on this centimetre grid.



Complete the rectangle so that it has a **perimeter** of 20 cm

[1 mark]

5

Share £180 in the ratio 1 : 9

[2 marks]

Answer £ _____ and £ _____



- 6 A football team has P points.

$$P = 3W + D$$

W is the number of wins

D is the number of draws

A team has 6 wins and 2 draws.

How many points does the team have?

[1 mark]

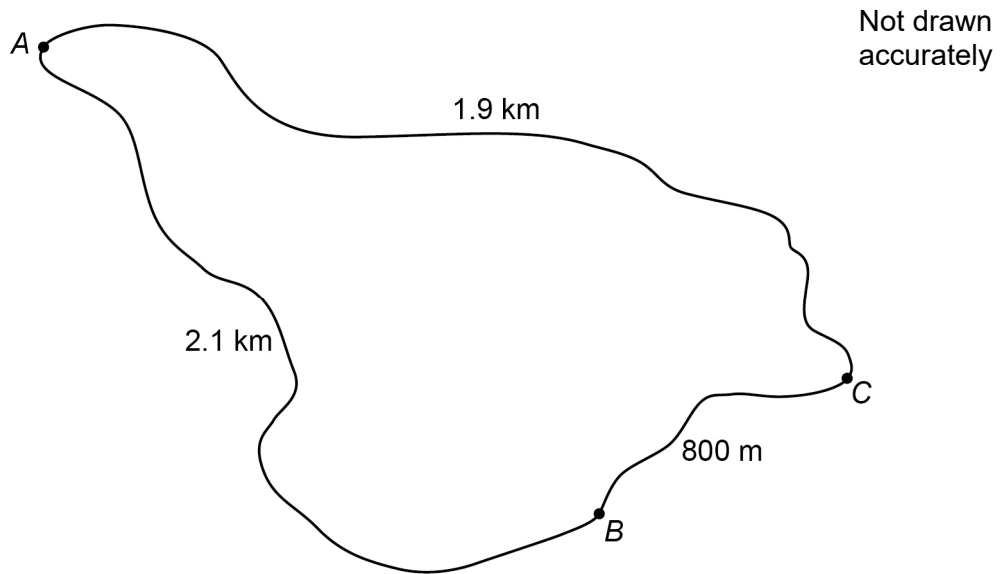
Answer _____



7

A , B and C are connected by paths.

The length of each path is shown.



Nathan and Sue each walk from A to B .

Nathan walks along the path $A \rightarrow B$

Sue walks along the paths $A \rightarrow C \rightarrow B$

How much **further** does Sue walk than Nathan?

Give your answer in kilometres.

[3 marks]

Answer _____ km



Answer _____

Answer _____

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.

Answer :

Ali has £80

Joe spends $\frac{2}{3}$ of this money.

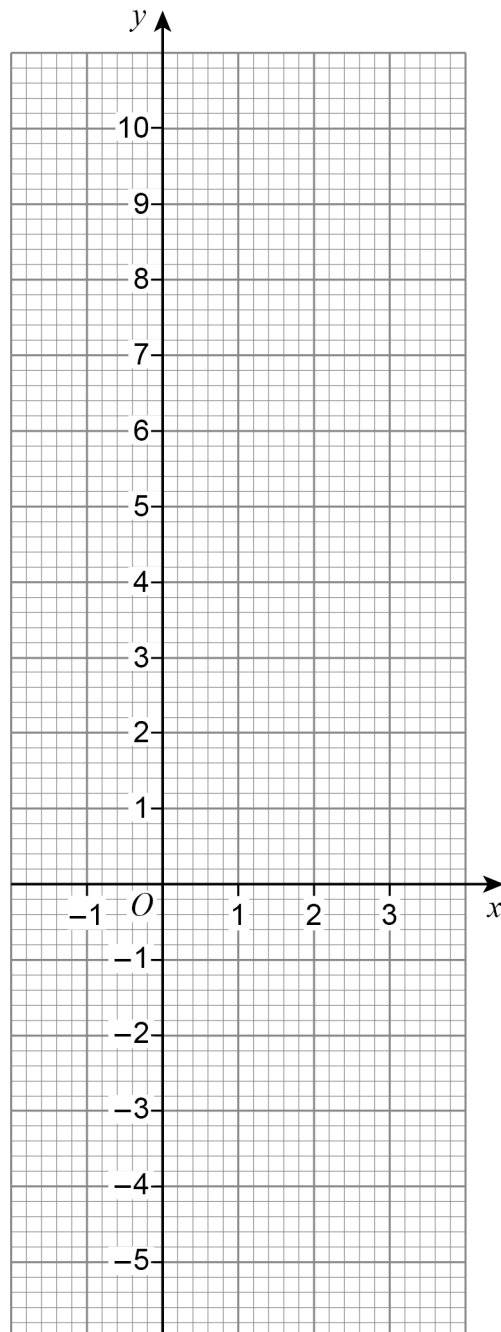
What fraction of the £80 does Ali have now?

[4 marks]

Answer _____



11

Draw the graph of $y = 3x - 1$ for values of x from -1 to 3 **[3 marks]****Turn over ►**

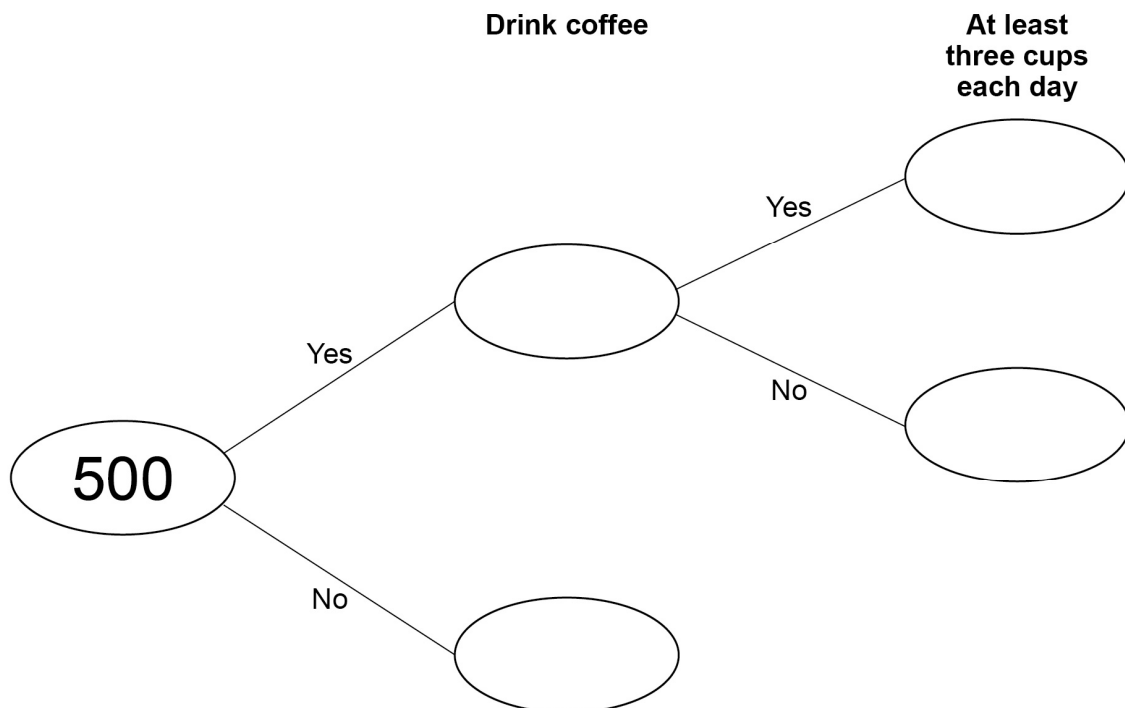
12 500 people are asked if they drink coffee.

$\frac{9}{10}$ say Yes.

20% of the people who say Yes drink at least three cups each day.

12 (a) Complete the frequency tree.

[4 marks]



12 (b) What fraction of the 500 people drink at least three cups of coffee each day?
Give your answer in its simplest form.

[2 marks]

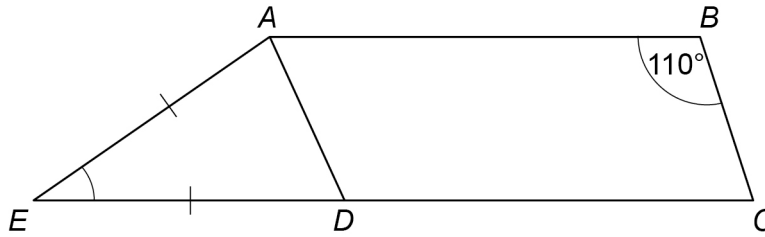
Answer _____



13

Trapezium $ABCE$ is made from parallelogram $ABCD$ and isosceles triangle ADE .

$$AE = DE$$



Not drawn
accurately

Work out the size of angle AED .

[3 marks]

Answer _____ degrees

14

n is an odd number.

p is a prime number.

In each part write down possible values of n and p so that

$n + p$ is a square number.

[1 mark]

$n =$ _____ $p =$ _____

Turn over ►



15

Work out $2\frac{1}{3} \div \frac{4}{5}$

Give your answer as a mixed number.

[4 marks]

Answer _____

16

 $3a + b = 7$ and $6x + 8y = 40$ Show that $9a + 3b$ has a **greater** value than $3x + 4y$

[2 marks]

6

END OF QUESTIONS**Copyright Information**

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