



KEY STAGE 2
MATHEMATICS

SET A

PAPER 3 (REASONING)



No Calculators



40 Minutes

First Name	
Last Name	

Total Marks	35
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1. Complete the number sorting table below.

One has been done for you.



	Multiple of 4	Not a multiple of 4
Multiple of 6	24	
Not a multiple of 6		

Marks

/2

2. Below is a **magic square**. In a magic square, each row, column and diagonal **add** up to the **same** number.

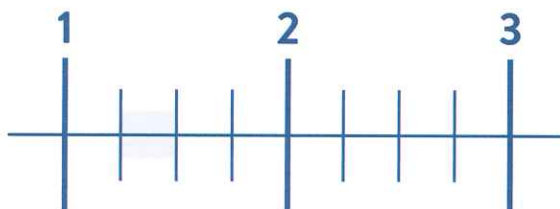
Calculate the two missing values and write them in the magic square.



	$\frac{1}{12}$	$\frac{1}{2}$
$\frac{1}{4}$	$\frac{5}{12}$	$\frac{7}{12}$
$\frac{1}{3}$		$\frac{1}{6}$

/2

3. Part of this number line is shaded.



Circle **all** of the numbers that belong within the shaded section of the number line.



1.05

1.4

$1\frac{1}{3}$

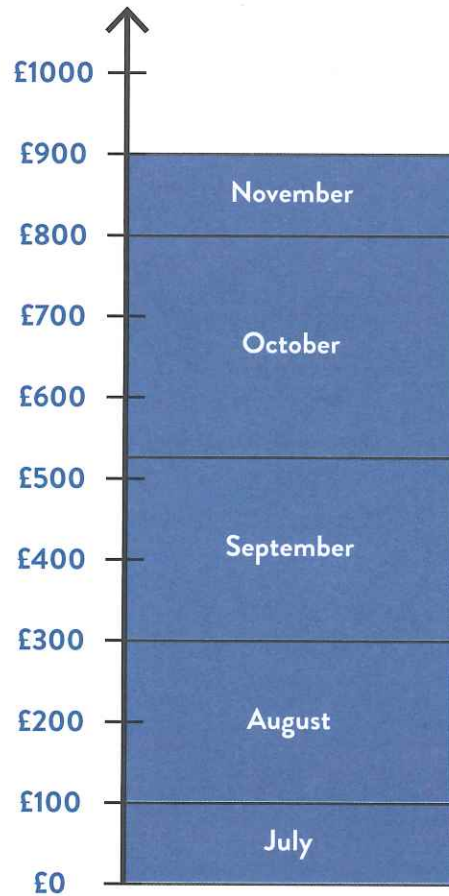
$1\frac{1}{5}$

/1

4. A church group is aiming to collect £1,000 in the last six months of the year.

Marks

The chart below shows how much has been raised by the end of November.



In which **single** month was **more** than £250 collected?



/1

How much money was collected in September, October and November **altogether**?



/1

5. The numbers in the sequence below **decrease** by 17 each time.

Complete the sequence.



25 8 -26 -60

Marks

6. Below are some cards with number operations on them:

<input type="text" value="÷ 10"/>	<input type="text" value="÷ 100"/>	<input type="text" value="÷ 1,000"/>
<input type="text" value="× 10"/>	<input type="text" value="× 100"/>	<input type="text" value="× 1,000"/>

Choose **two** cards to complete the calculations below:



7.2 = 720

7.2 = 0.0072

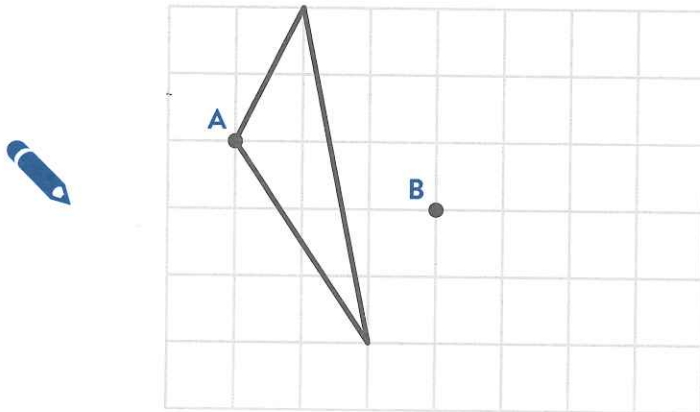
7. Write the number 30,508 in **words**.



Marks

8. The triangle on the grid below is **translated** so that point A moves to point B.

Draw the triangle in its new position.

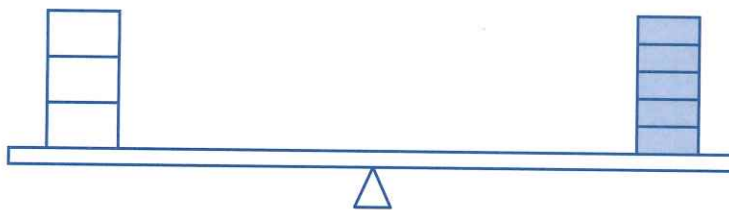


Use a ruler

/1

9. **Three** white boxes perfectly balance **five** blue boxes.

If each white box weighs 13.5g, **how much** does each blue box weigh?



Show your working.



g

/2



No Calculators.

Marks

10. Four bananas cost 84p.

Six apples cost £2.28.

How much **cheaper** is **one** banana than **one** apple?

Show your working.



£

/2

11. Write the missing values in the sum below to make the subtraction correct.



$$\begin{array}{r}
 8 \square 3 \square \\
 - \square 5 \square 8 \\
 \hline
 5 \ 7 \ 1 \ 9
 \end{array}$$

/2

12. Two decimal numbers are **added** together. Their total is 1.

One of the numbers is 0.008.

What is the other number?



/1

13. Four cards with fractions on them are shown below:


$$\frac{2}{3}$$


$$\frac{3}{4}$$

$$\frac{4}{9}$$

$$\frac{5}{6}$$

Using **all** of the cards at least once, make two **different** expressions. You will need to use some cards twice.

 < <

 < <

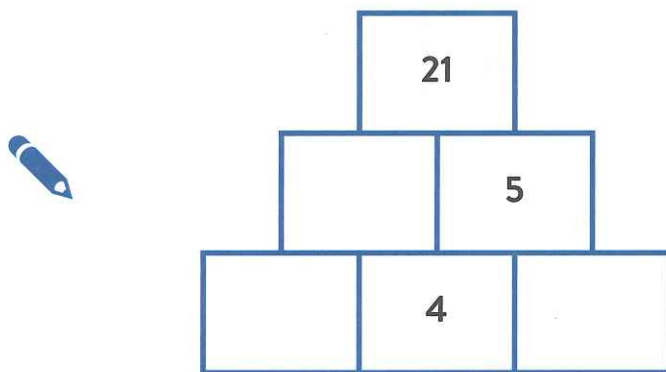
Marks

/2

14. A number pyramid is shown below.

The number in each box is the **product** of the two numbers below it.

Complete the number pyramid.

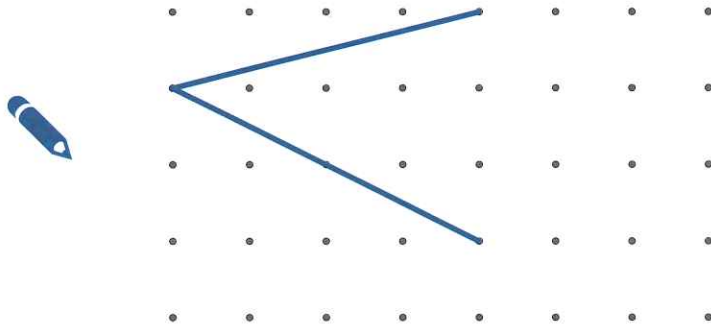


/2

Marks

15. Two sides of a **quadrilateral** have been drawn below.

Complete the quadrilateral so that it contains **three** acute angles.

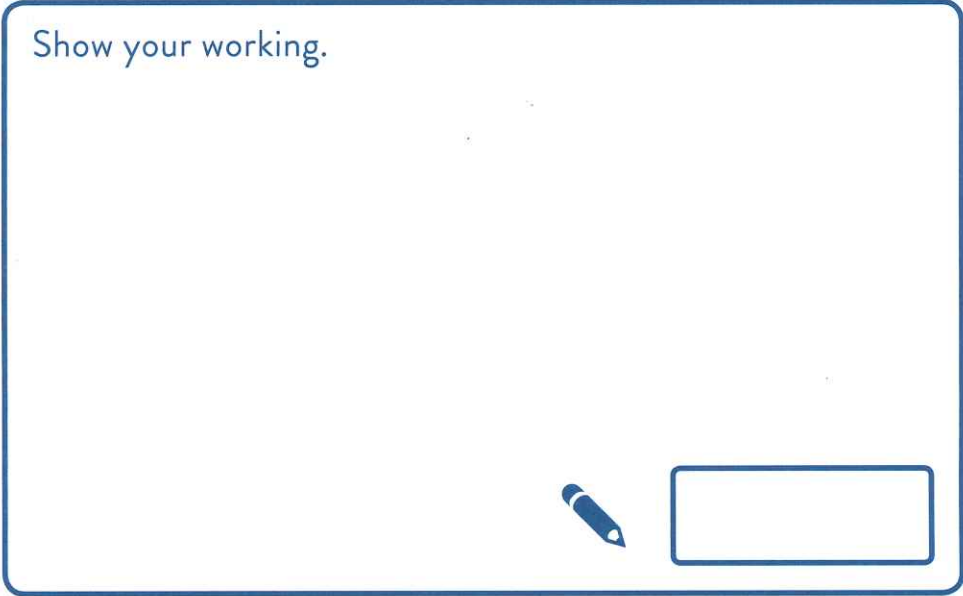


/1

16. Susan thinks of a number. She **subtracts** 3 and then **doubles** the result. She then **adds** 2. The final result is 6.5.

What was the **original** number that Susan thought about?

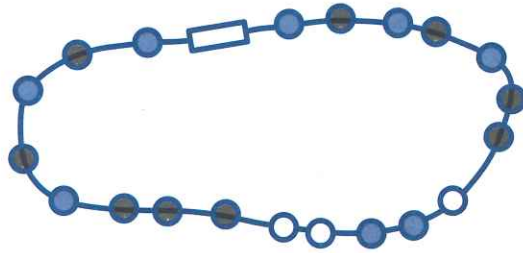
Show your working.



/2

Marks

17. A string of 20 round beads is shown below:



What **percentage** of the beads are blue?


 %

18. Circle **all** the amounts of money that can be made with exactly **three** coins.



60p

63p

64p

65p

72p

73p

19. Two whole numbers are each between 40 and 60.

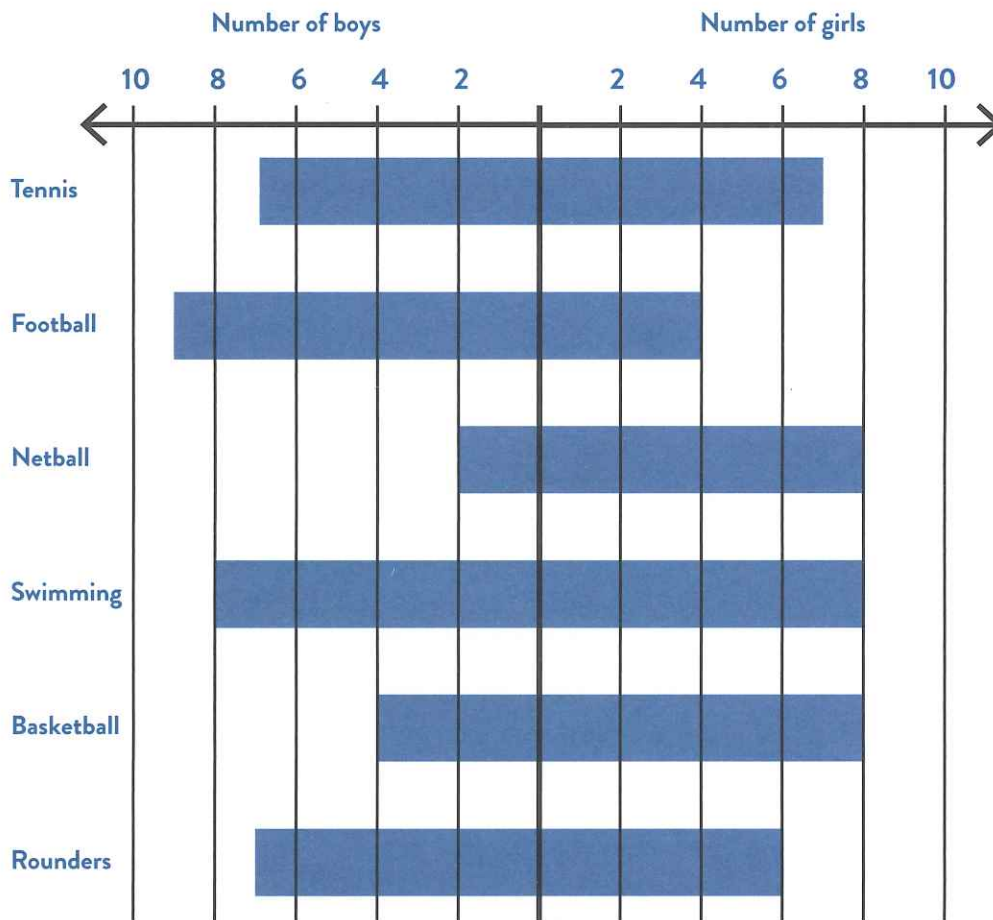
The **product** of the two numbers is 2,378.

What are the two numbers?



and

20. A number of children each chose their favourite sport. The results are shown below:



Which sport was chosen by the most children?



How many **more** boys than girls chose football?



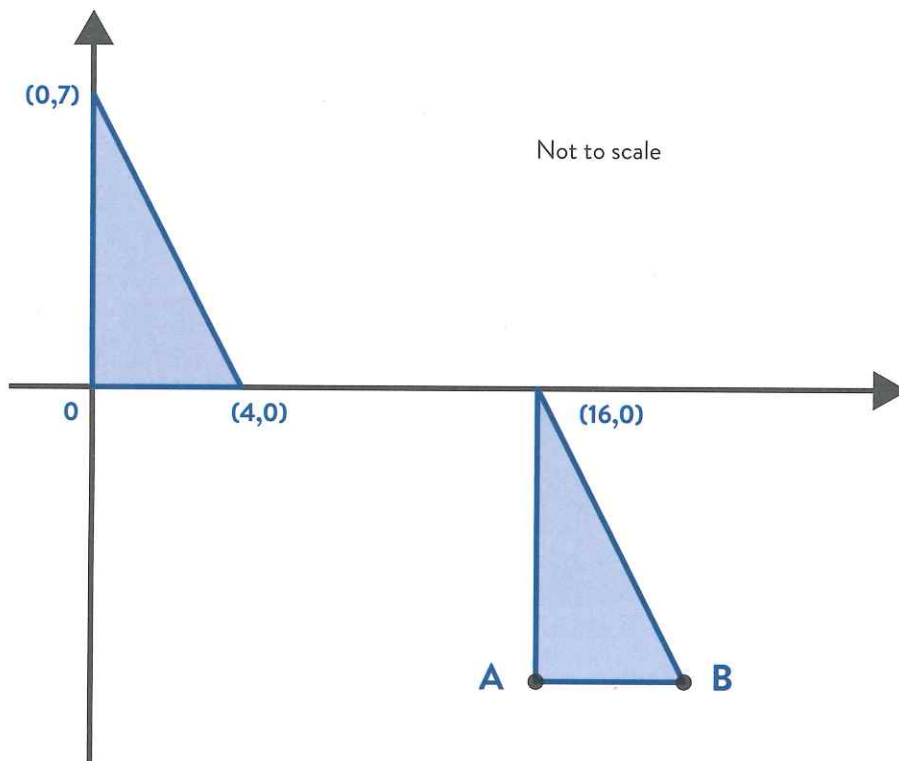
boys

Which sports were liked by more girls than boys?



21. Two **identical** triangles are shown on coordinate axes below:

Marks



Write the coordinates of points A and B.



A =



B =

END OF TEST