



**HABERDASHERS' MONMOUTH SCHOOL FOR GIRLS
AND INGLEFIELD HOUSE**

GIRLS 7 - 18 with boarding from 7

Past Papers For Admission at 11+

NAME.....

AGE.....years.....months

HABERDASHERS' MONMOUTH SCHOOL FOR GIRLS



ENTRANCE EXAMINATION 2015

MATHEMATICS PAPER

Time allowed: 1 hour

CALCULATORS ARE NOT ALLOWED

Instructions:

Show **all** your working in the spaces provided.

If you make a mistake, cross it out and try again.

There is space at the back of the booklet if you need it.

If you cannot do a question, leave it and go on to the next one.

When you have finished all the other questions, go back and try it again.

1. Calculate the number which is one hundred and nineteen more than five thousand eight hundred and eighty four. Give your answer in numbers.

Answer.....
[3]

2. Subtract 657 from 2364.

Answer.....
[2]

3. Work out
 47×53

Answer.....
[3]

4. Work out
 $5142 \div 6$

Answer.....
[2]

5. $29 \times 16 = 464$
Write down the value of
 290×1600

Answer.....
[1]

6. Find 20% of 240.

Answer.....
[2]

7. Find $\frac{2}{3}$ of 57 .

Answer.....
[3]

8. A crate holds eight milk bottles.
How many crates can be
filled using 364 bottles, and how
many bottles will be left over?

Answer..... crates
.....bottles left [3]

Please turn over

9. Fill in the missing numbers in the boxes so that the answer to each calculation is 100.

$32 + \dots\dots\dots$	$25 \times \dots\dots\dots$
$= 100$	
$\dots\dots\dots \div 5$	$50\% \text{ of } \dots\dots\dots$

[4]

10. Two of the following calculation give the same answer as 6×30 .
Put a ring round each of those calculations.

4×35 5×40 2×90 12×15 3×50

[2]

11. Write down two **different prime** numbers which add together to make 20?

Answer and [2]

12. Meg baked a Christmas cake using the following quantities of fruit: 250 grams of raisins, 300 grams of currants, 375 grams of sultanas, 200 grams of glacé cherries and 175 grams of mixed citrus peel. Work out the total amount of fruit she used, giving your answer in **kilograms**.

Answer..... kg [3]

13. (a) List these temperatures in order, coldest first.

2°C -3°C -7°C 5°C 3°C 0°C -4°C

.....[2]

- (b) What is the difference between the highest temperature and the lowest temperature in the list?

Answer[1]

Please turn over

14. Hattie had to leave school early to go to the dentist.

- a) School ends at 4.05 p.m. but Hattie left quarter of an hour early.
At what time did she leave?

Answer [2]

The High School bus stop is just outside the school, and the bus always runs on time.

Hattie caught the first bus which arrived after she left school.

Here is part of the bus timetable displayed at the bus stop.

Town centre	...	13.30	14.30	15.30	16.30	17.30	...
Big Hill	...	13.42	14.42	15.42	16.42	17.42	...
High School	...	13.55	14.55	15.55	16.55	17.55	...
Low Dale Dental Centre	...	14.20	15.20	16.20	17.20	18.20	...
Bus station	...	14.31	15.31	16.31	17.31	18.31	...

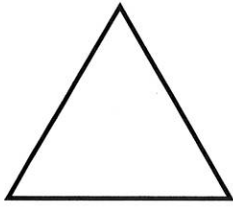
- b) At what time on the **24 hour clock** did Hattie's bus arrive at the High School bus stop?

Answer[1]

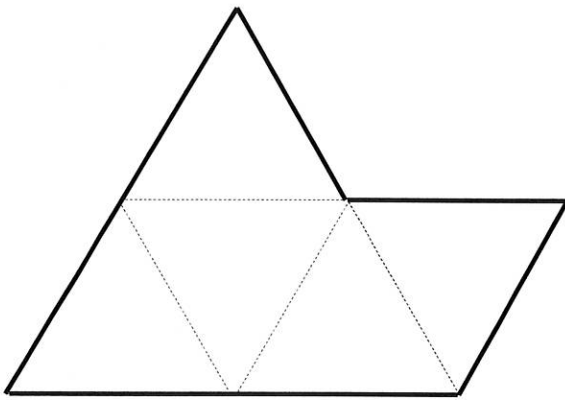
- c) How many minutes did the bus take to get to the Low Dale Dental Centre?

Answer[1]

15. The perimeter of this equilateral triangle is 15 cm.



The shape below is made up of five such triangles joined along their edges. What is the perimeter of this shape?



Answercm [3]

16. Circle the correct amount to complete each sentence.

a) The height of a two storey house is about

10 m

100 cm

0.1 km

[1]

b) A teaspoon holds about

0.5 litres

50 ml

5 ml

[1]

c) The mass of a loaf of bread is about

60 g

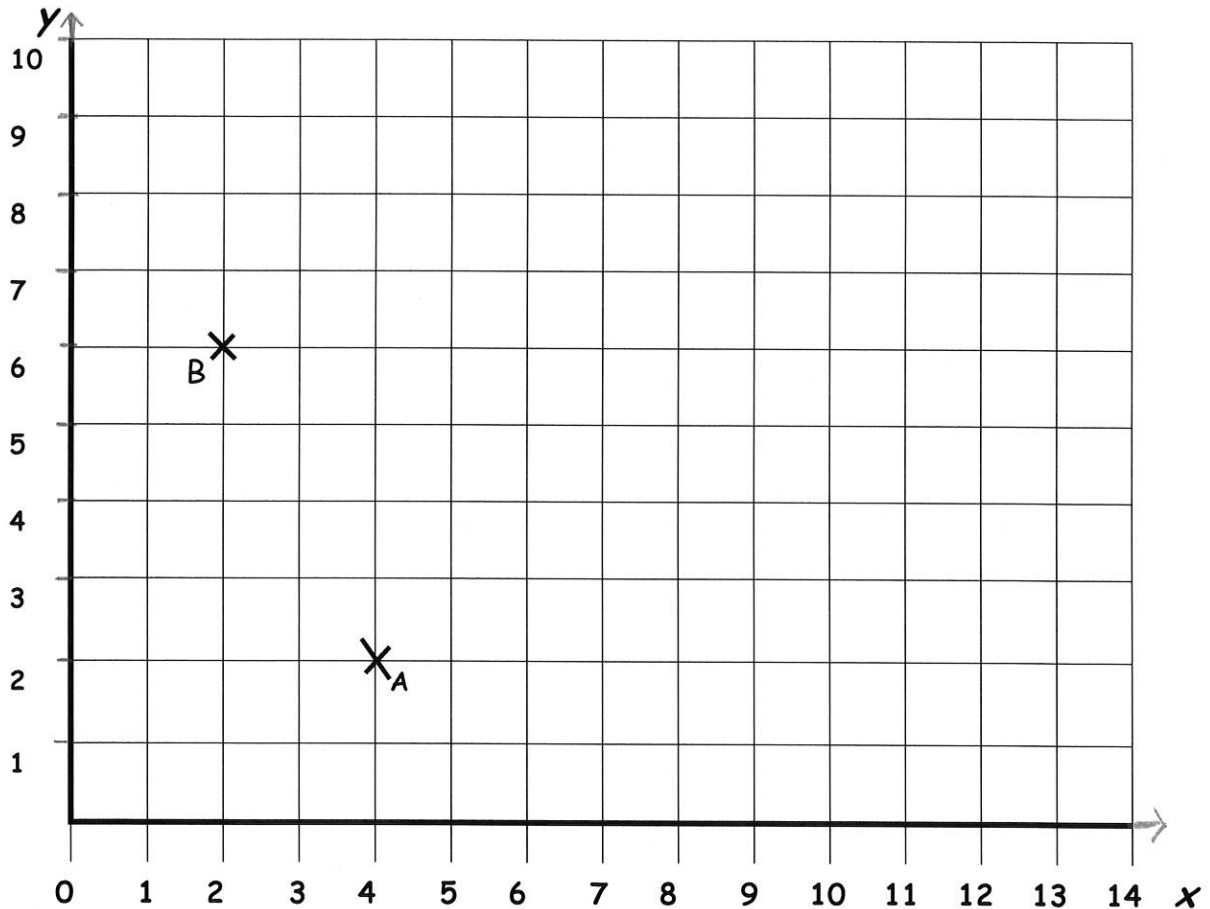
600g

6 kg

[1]

Please turn over

17. Here are axes drawn on a centimetre square grid.



Point A, which is marked by a cross, has coordinates (4,2).

Point B, which is marked by a cross, has coordinates (2,6).

- a) Plot the point (8,9) and label it C. [1]

A, B and C are three corners of a rectangle ABCD.

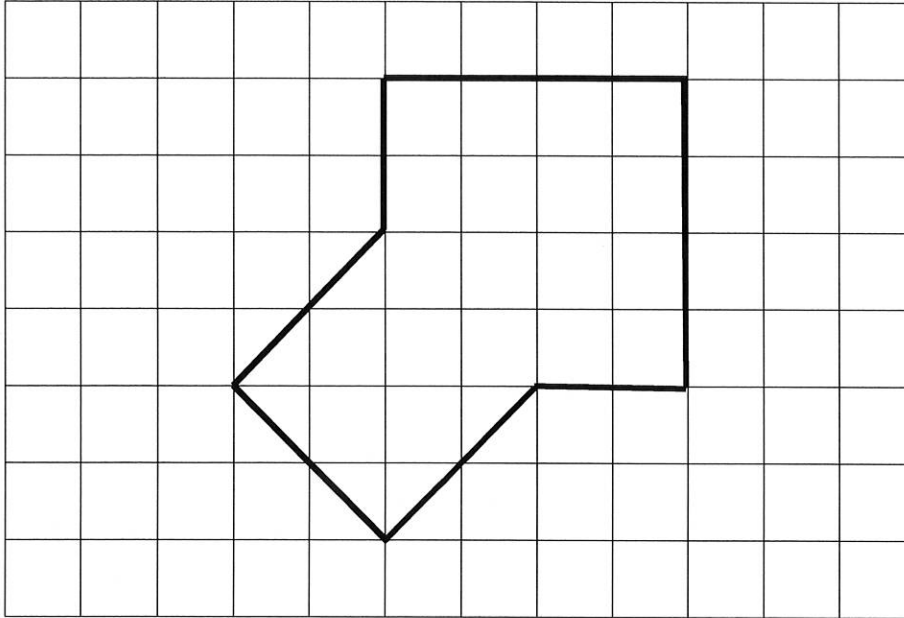
- b) Draw the rectangle and write down the coordinates of the fourth corner, D.

Answer D = (,) [2]

- c) Say whether each of the following statements is true or false:

- i) side AB is parallel to side DC Answer[1]
- ii) the diagonals of the rectangle are perpendicular. Answer[1]
- iii) the rectangle has two lines of symmetry. Answer[1]

18. Here is a centimetre square grid.



- a) Find the area of the shape drawn, stating the units of your answer.

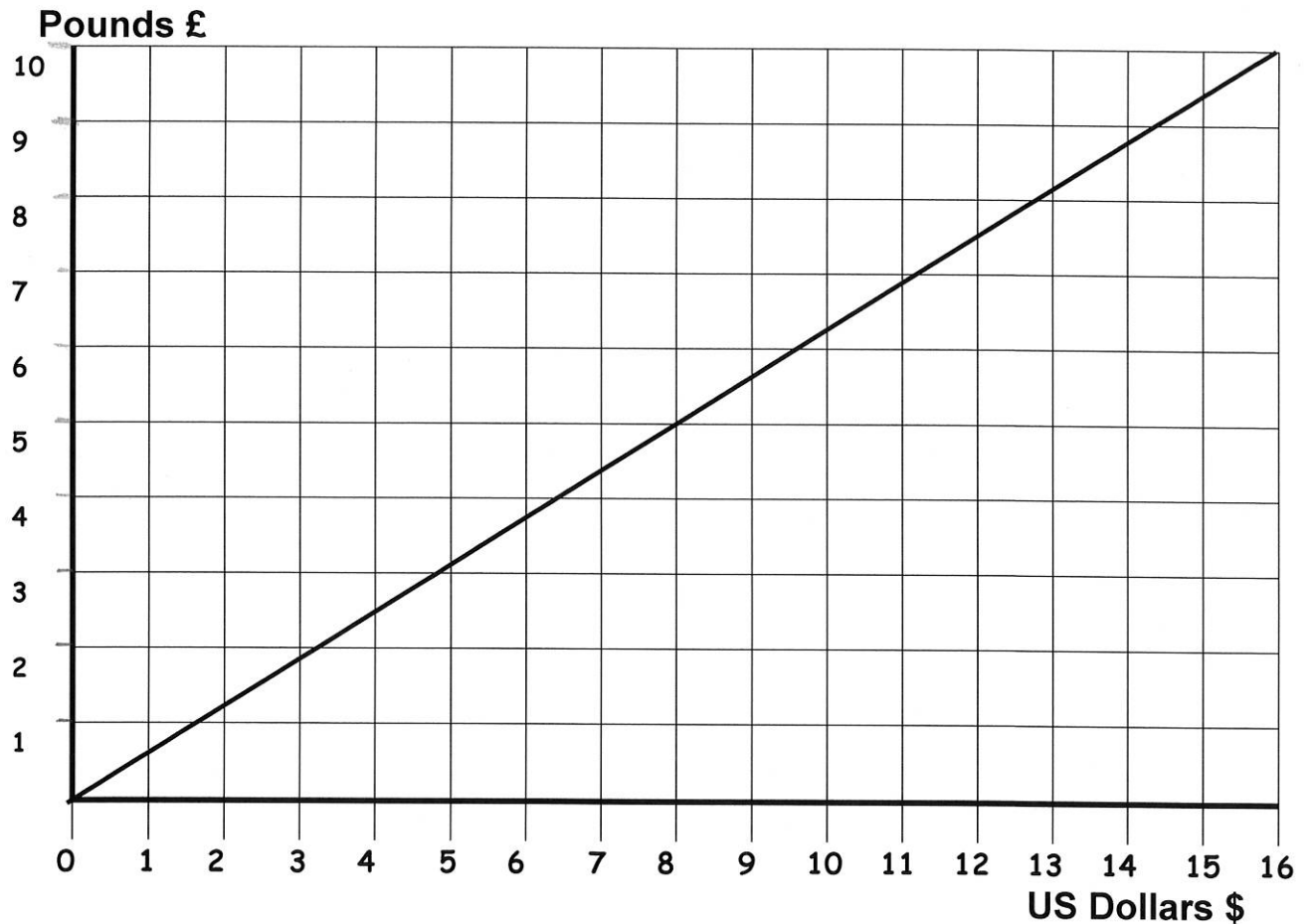
Answer [3]

- b) How many right-angles does the shape have?

Answer right-angles [1]

Please turn over

19. Here is a graph for converting British pounds sterling to and from US dollars.



a) What is £5 worth in US dollars?

Answer[1]

Katy went Christmas shopping in New York.

b) She took £500 to spend. How much was this in US dollars?

Answer[1]

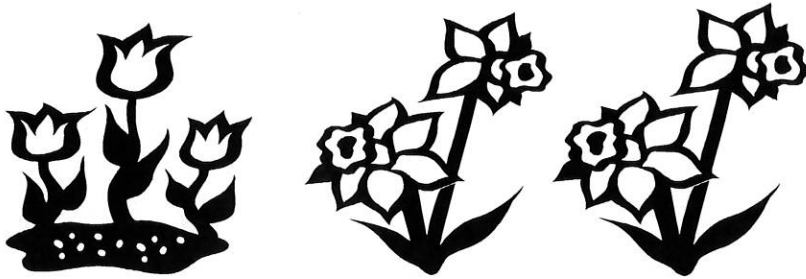
c) She bought a book for 12\$. Estimate the cost of the book in £.

Answer[1]

d) She bought a coat for 240\$. Estimate the cost of the coat in £.

Answer[2]

20. Natalie was planting spring bulbs.
She planted 3 tulips for every 4 daffodils.



- a) At first she planted 36 tulips. How many daffodils did she plant?

Answer daffodils [3]

- b) Then she decided she needed to plant a **total** of 140 bulbs.
How many **more** of each type of bulb did she plant?

Answer tulips and daffodils [5]

Please turn over

21. In their Maths lesson the pupils of 6X are studying sequences.

a) The numbers in Matt's sequence go up by the same amount each time.

4 , 7 , 10 , 13 , ,

Fill in the missing fifth and sixth numbers.

[2]

b) The numbers in Susan's sequence also go up by the same amount each time, but it is a different amount from Matt's. The first term is 2 and the fifth is 26. Fill in the three missing numbers.

2 , , , , 26

[4]

c) Sioned's rule for finding the next number in her sequence is:

Divide the last number by 2 and then take away 4.

She starts with 168, so the second number is $168 \div 2 - 4 = 84 - 4$
 $= 80$

i) Fill in the third term in her sequence 168 , 80 ,

[2]

ii) How many **positive** numbers are there in her sequence?

Answer[2]

22. Pam and Pete were discussing how many mince pies they had eaten over the Christmas holiday.



Pete said: *I ate 8 more mince pies than you.*

Pam said: *If you double the number of mince pies I ate and add it to the number you ate, then the total number is 53.*

How many mince pies did each of them eat?

Answer Pam ate mince pies Pete ate mince pies [4]

Please turn over

23. Class 6Y have done a survey on how pupils travel to school.

a) Lucy presented the results using a pictogram.

How pupil gets to school	Key: ☺ represents one pupil
Walk	☺ ☺ ☺ ☺ ☺ ☺
Bicycle	☺
Car	☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺
Bus	☺ ☺ ☺ ☺ ☺

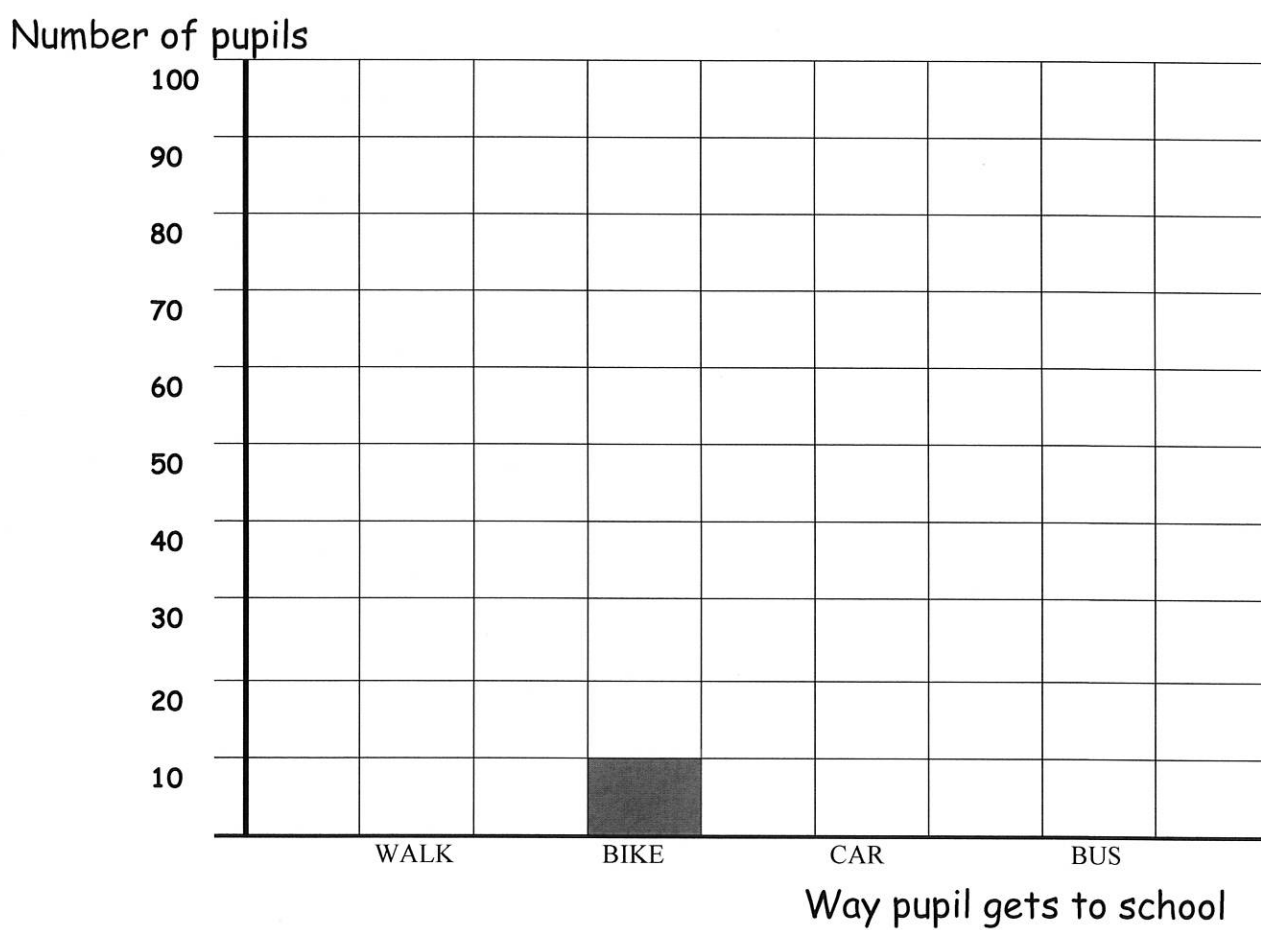
a) What fraction of the pupils in 6Y come to school in a car?
Give your answer as a fraction in its lowest terms.

Answer[2]

b) In the whole school there are 150 pupils.
Ten pupils travel to school on bicycles. One sixth walk to school.
Two fifths travel to school by car. The rest travel on the school bus.
Calculate how many travel by each method, and fill in the table on the next page.

How pupil gets to school	Walk	Bicycle	Car	Bus
Number of pupils		10		

c) Illustrate the results for the **whole school** by drawing a bar chart below.



[3]

Please turn over

- 24.** Paint is sold in 1 litre, 3 litre and 5 litre tins. The 1 litre tins cost £3·50 each, the 3 litre tins cost £6·50 each and the 5 litre tins cost £12 each. What is the cheapest way of buying **EXACTLY** 11 litres of paint, and how much will it cost?

Answer Cost £[4]

- 25.** Olivia, Penelope, Queenie, Rachel and Sophia are sisters.
Two of them are twins.
The range of their ages, in years, is 12.
The mode of their ages is 28.
The median of their ages is 24.
The mean of their ages is 23.
Rachel has two older sisters and two younger ones.
Olivia is not a twin.
Queenie is nine years younger than Sophia.
Work out the age of each sister.

Answer: Olivia is years old
Penelope is years old
Queenie is years old
Rachel is years old
Sophia is years old

[7]

There are no more questions.

There is extra space on the next two pages if you need it.
Make sure you write the number of the question you are answering.