

DO NOT WRITE ON THIS PAPER	TIME – 1 hour 30 minutes	<i>Paper 5 of 5 from ZigZag Education</i>
Sample GCSE Examination Paper Foundation tier non-calculator paper	Standard Equipment: pen, pencil, ruler, protractor, compasses.	



1. Nick is in the Post Office, and has a few jobs to do.
- a) Nick has three letters to post, weighing 44g, 26g, and 84g.
Any letter weighing over 45g needs two stamps. Stamps cost 19p each.
How much does Nick pay?
.....
..... Answer [2]
- b) Nick starts with £500 in his account. Nick takes 25% of the money from his account.
Express how much Nick takes out in pounds.
.....
..... Answer [2]
- c) Nick spots a special offer. Four pens can be bought for the same price as three.
He buys eight pens, and spends £12.60. How much does a single pen normally cost?
.....
..... Answer [3]

2. John throws a biased die 120 times. On 80 throws, the die lands on 6.
- a) How many times did the die not land on 6? Answer [1]
- b) On a fair die, what is the probability that with one throw, a six is thrown.
..... Answer [1]

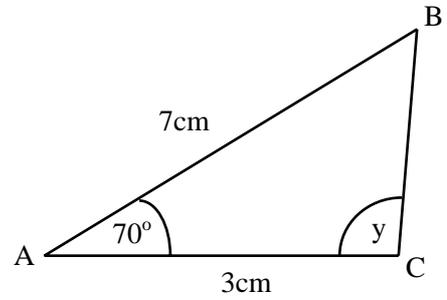
3. On the grid to the right, reflect the 'L' shape down. [2]

4. Draw in the lines of symmetry on the

5. Find the next two terms in each of the number sequences below. [4]
- a) 1, 2, 4, 8, 16, Answer [2]
- b) 2, 5, 8, 11, 14, Answer [2]
- c) 5, 1, 6, 7, 13, Answer [2]

10. Here is a sketch of a triangle ABC.

a) Construct a full scale, accurate drawing of the triangle.



[3]

b) Measure the size of angle y. Answer [1]

c) Measure length BC.
 Answer [2]

11. a) Calculate the mean and range of 2, 4, 5, and 5.....

..... Mean [2]

..... Range [1]

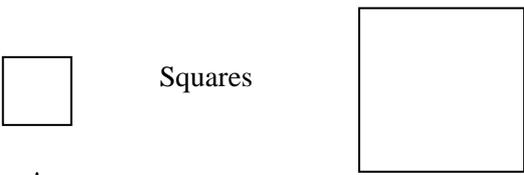
b) What is the mode of 2, 4, 5, and 5?..... Answer [1]

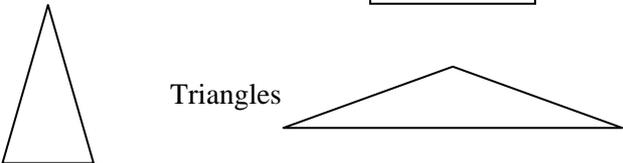
c) What is the median value of 1, 3, 7, 8, and 8? Answer [1]

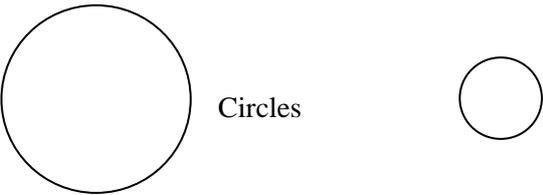
d) What additional positive number will give the numbers 3, 6, 9, 9, 9, 9, a range of 23?
 Answer [2]

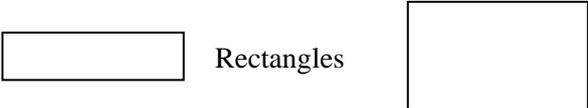
For Questions 12 onwards there is no marked out space to write your answers. Where there is not enough space, write your answers on separate paper. In your actual GCSE examination, marked spaces are normally provided on the whole paper.

12 Which of these pairs of shapes are mathematically similar?

(a)  Squares

(b)  Triangles

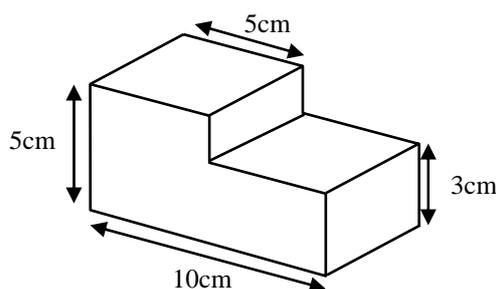
(c)  Circles

(d)  Rectangles 2 marks

13. Jack and Jill each carry one bucket up a hill to fetch water. Each bucket holds 1 litre. On the way down they both carry one bucket. Jack starts by carrying a full bucket but on the way down Jack falls down, spilling a quarter of his water. Jill starts by carrying a full bucket but on the way down Jill falls down, spilling a third of her water.

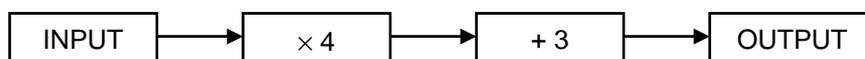
- a) Write as a fraction how much water is being carried after the fall by–
- Jack
 - Jill
- b) How much water in total are Jack and Jill now carrying? 5 marks

14. Construct an accurate 2D projection of the shape shown below, with a plan and both front and side elevations. 8 marks



15. Find the next two terms in the number sequences below.
- 14, 9, 4, -1, -6,
 - 16, 8, 4, 2, 1,
 - 1, 2, 3, 5, 8, 13,
- 3 marks

16. The diagram below shows a mathematical rule



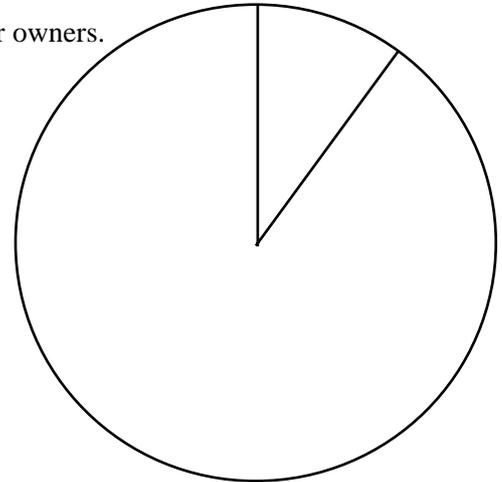
- What is the output, when the input is 7?
 - What is the input, when the output is 23?
 - What is the output, when the input is n ?
- 4 marks

17. a) Write down the list of factors of 24.
 b) From this list, state–
 i) Two factors which add to make 12.
 ii) Two factors whose product is 72. 5 marks
18. Fill in the table below for the equation $y = 3x - 7$ 5 marks

x	1	2	3	4	5
$y = 3x - 7$					

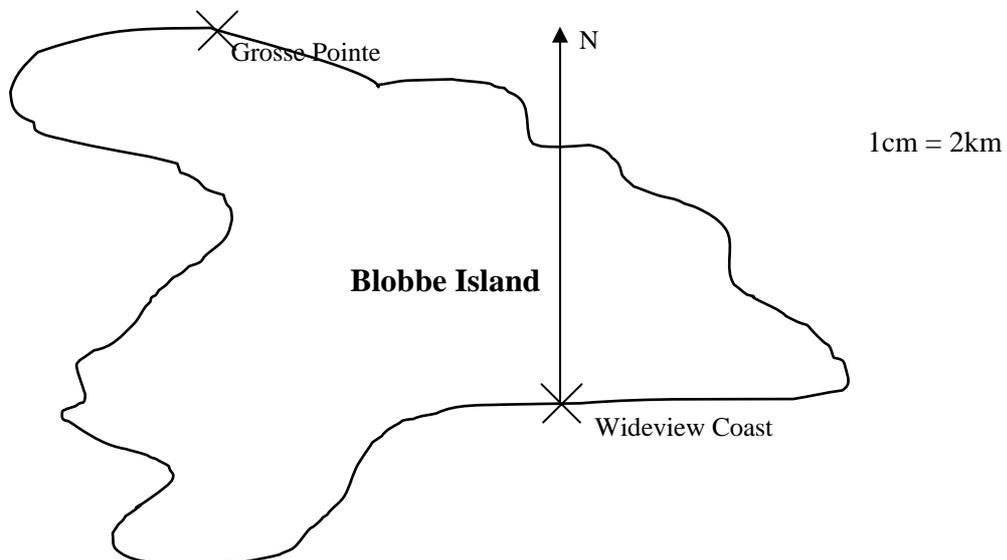
19. The chart shows the car model of 100 Volkswagen (VW) car owners.
 Complete the table and complete the pie chart.
 Make it clear which area represents which car make.

VW Car	Frequency	Angle
Golf	50	
Polo	10	
Passat	40	



7 marks

20. Carrie is at Wideview Coast on Blobbe Island, as shown below.
 She wants to meet up with her friend, Martin Blank, who is at Grosse Pointe on the other end of the island.
- a) Using the diagram, find–
 i) The bearing to Grosse Pointe from Wideview Coast.
 ii) The distance on the diagram from Grosse Pointe to Wideview Coast.
- b) Using the scale of 1cm = 2km, find the true distance between Wideview Coast and Grosse Pointe.
- c) Carrie walks slowly at 1.5km per hour.
 How long will it take her to reach Martin, to the nearest hour?



6 marks