

Answer ALL TWENTY THREE questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1

3	8	16	19	24	51	60	81
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From the numbers in the box, write down

(a) an odd number

.....
(1)

(b) a multiple of 12

.....
(1)

(c) a square number

.....
(1)

(d) a prime number

.....
(1)

(Total for Question 1 is 4 marks)

2 Complete the following statements by writing a number on each dotted line.

(a) A pentagon has sides.

(1)

(b) The size of each angle in an equilateral triangle is^o

(1)

(c) 1 kilometre = metres.

(1)

(Total for Question 2 is 3 marks)



3 The table gives the surface areas, in square kilometres, of six lakes in Africa.

Lake	Surface area (square kilometres)
Albert	5299
Malawi	29 500
Mweru	5120
Tanganyika	32 600
Turkana	6405
Victoria	68 879

(a) Which of these lakes has the least surface area?

.....
(1)

(b) Write the number 6405 in words.

.....
(1)

(c) Write the number 68 879 correct to the nearest thousand.

.....
(1)

Sammy says that the surface area of Lake Malawi is about $5\frac{1}{2}$ times the surface area of Lake Albert.

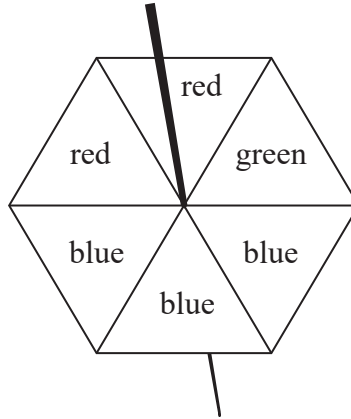
(d) Is Sammy correct?
Give a reason for your answer.

.....
.....
(2)

(Total for Question 3 is 5 marks)



4 The diagram shows a fair 6-sided spinner.



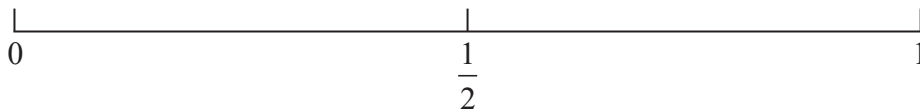
Rami is going to spin the spinner once.

(a) Circle the word in the box below that best describes the likelihood that the spinner will land on green.

impossible	unlikely	evens	likely	certain
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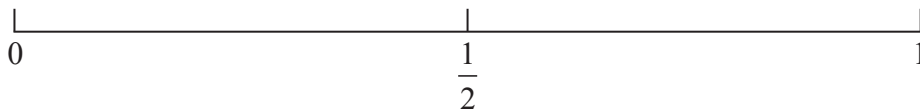
(1)

(b) On the probability scale below, mark with a cross (X) the probability that the spinner will land on blue.



(1)

(c) On the probability scale below, mark with a cross (X) the probability that the spinner will land on yellow.



(1)

(Total for Question 4 is 3 marks)



- 5 There are 12 481 people at a concert.
8906 of these people are adults.
The rest of the people are children.

$\frac{3}{5}$ of the children are boys.

Work out the number of girls at the concert.

.....
(Total for Question 5 is 4 marks)

- 6 (a) Simplify $6e \times 2f$

.....
(1)

- (b) Simplify $5m + 7k - 2m + k$

.....
(2)

- (c) Solve $5y + 3 = 14$

$y =$
(2)

(Total for Question 6 is 5 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

7 Here are the shoe sizes of 11 people.

7 8 4 4 4 10 5 7 7 4 4

(a) Write down the mode.

.....
(1)

(b) Work out the range.

.....
(2)

(c) Find the median.

.....
(2)

Clark works in a shoe shop.

On Tuesday morning he sold some pairs of shoes.
The mean price of the pairs of shoes was £34

On Tuesday afternoon he sold only two pairs of shoes.
The prices of these pairs of shoes were £31 and £49

(d) Is the mean price of all the pairs of shoes Clark sold on Tuesday more or less than £34?
You must give a reason for your answer.

.....
.....
.....
(1)

(Total for Question 7 is 6 marks)



8 The diagram shows two triangles, CDB and BDA .

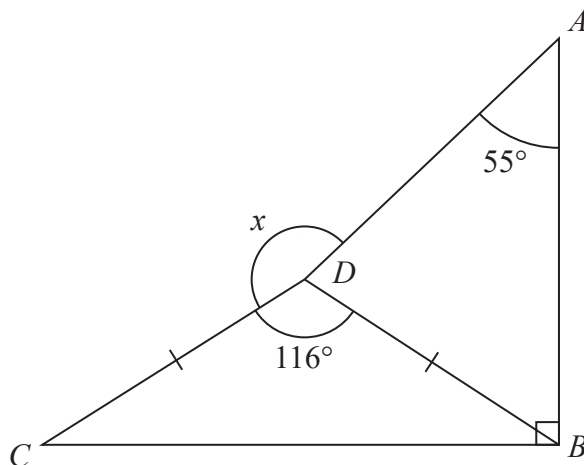


Diagram **NOT** accurately drawn

$$DC = DB$$

$$\text{Angle } ABC = 90^\circ$$

$$\text{Angle } CDB = 116^\circ$$

$$\text{Angle } DAB = 55^\circ$$

Work out the size of the angle marked x .

Give a reason for each stage of your working.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(Total for Question 8 is 5 marks)



- 9 (a) Write these fractions in order of size.
Start with the smallest fraction.

$$\frac{7}{10} \quad \frac{4}{5} \quad \frac{1}{2} \quad \frac{29}{40}$$

.....
(2)

(b) Show that $\frac{8}{15} + \frac{3}{10} = \frac{5}{6}$

(2)

(c) Show that $4\frac{2}{3} \div 1\frac{1}{9} = 4\frac{1}{5}$

(3)

(Total for Question 9 is 7 marks)

