1.
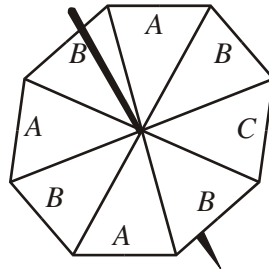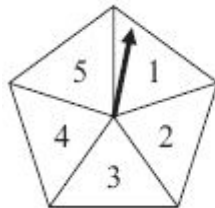

The diagram shows a fair spinner in the shape of a rectangular octagon.
The spinner can land on A or B or C.
Marc spins the spinner.

Write down the probability that the spinner will land on A.

....
(Total 2 marks)

2. Ishah spins a fair 5-sided spinner.
She then throws a fair coin.

(a) List all the possible outcomes she could get.
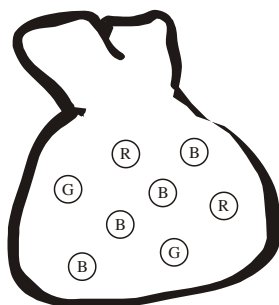   The first one has been done for you.

(1, head)...

....

....

(2)

Ishah spins the spinner once and throws the coin once.

(b) Work out the probability that she will get a 1 and a head.

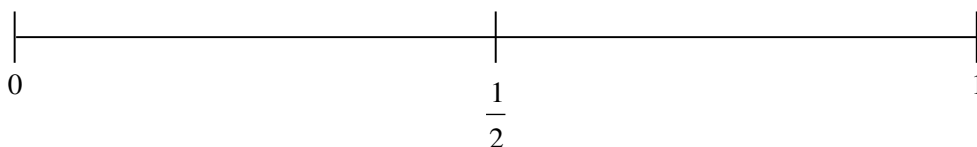...................................
(1)
(Total 3 marks)

3. There are eight marbles in a bag.

Four marbles are blue (B),
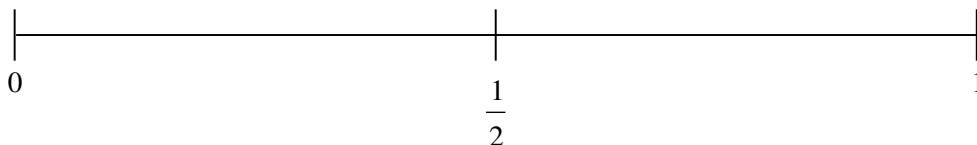two marbles are red (R)
and two marbles are green (G).

Steve takes a marble at random from the bag.

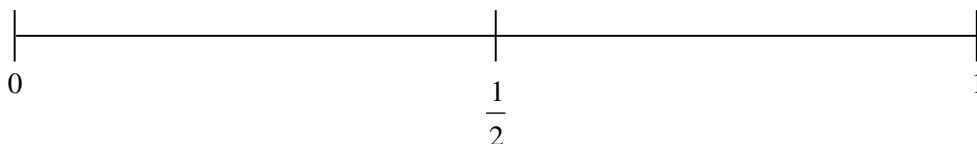(a) On the probability scale, mark with the letter B, the probability that Steve will take a blue marble.

```
├────────────────┼────────────────────────┤
0                1                         1
                 ─
                 2
```

(1)

(b) On the probability scale, mark with the letter G, the probability that Steve will take a green marble.

```
├────────────────┼────────────────────────┤
0                1                         1
                 ─
                 2
```

(1)

(c) On the probability scale, mark with the letter Y, the probability that Steve will take a yellow marble.

```
├────────────────┼────────────────────────┤
0                1                         1
                 ─
                 2
```

(1)
(Total 3 marks)

4. Lucy uses some letter cards to spell the word "NOVEMBER".

| N | O | V | E | M | B | E | R |

Lucy takes one of these cards at random.

Write down the probability that Lucy takes a card with a letter E.

....

(Total 2 marks)

5. Here are some statements.

Draw an arrow from each statement to the word which best describes its likelihood.

One has been done for you.

| Certain |

| A head is obtained when a fair coin is thrown once. |

| Likely |

| A number less than 7 will be scored when an ordinary six-sided dice is rolled once. |

| Even |

| It will rain every day for a week next July in London. |

| Unlikely |

| A red disc is obtained when a disc is taken at random from a bag containing 9 red discs and 2 blue discs. |

| Impossible |
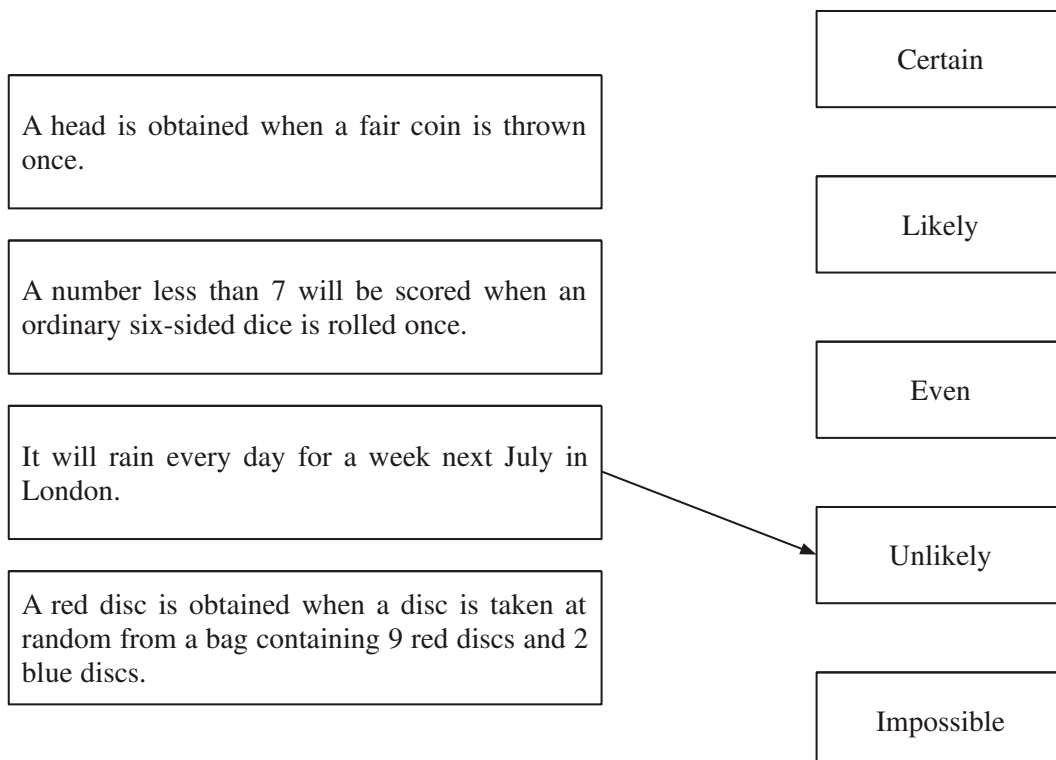
(Total 3 marks)

6. There are three beads in a bag.
One bead is red, one bead is white and one bead is yellow.

Sarah takes, at random, a bead from the bag.
She looks at its colour and then puts the bead back in the bag.

On the probability line,

      (i)   mark with the letter R the probability that Sarah takes a red bead.

    (ii) mark with the letter B the probability that Sarah takes a black bead.

```
├──────────────────────┼──────────────────────┤
0                      1                       1
                       2
```
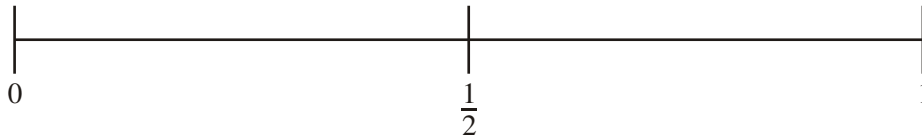
(2)
(Total 2 marks)

7. A bag contains some beads which are red or green or blue or yellow.

The table shows the number of beads of each colour.

Colour	Red	Green	Blue	Yellow
Number of beads	3	2	5	2

Samire takes a bead at random from the bag.
Write down the probability that she takes a blue bead.

....
(Total 2 marks)

8.
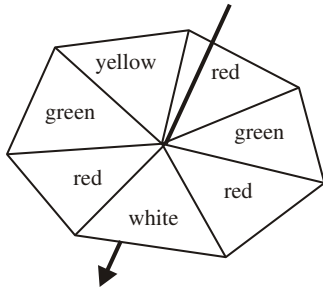
Here is a fair 7-sided spinner.
The spinner is to be spun once.
The spinner will land on one of the colours.

(a)   On which colour is the spinner most likely to land?

....

(1)

(b)   Write down the probability that the spinner will land on green.

....
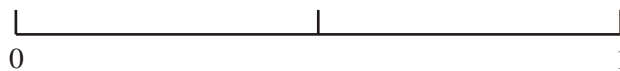
(1)

(Total 2 marks)

9.   On the probability scale below, mark

(i)   with the letter S, the probability that it will snow in London in June,

(ii)   with the letter H, the probability that when a fair coin is thrown once it comes down heads,

(iii) with the letter M, the probability that it will rain in Manchester next year.

(Total 3 marks)

10. Joshua rolls an ordinary dice once.
It has faces marked 1, 2, 3, 4, 5 and 6.

(a) Write down the probability that he gets

(i) a 6,

………………………

(ii) an odd number,

………………………

(iii) a number less than 3,

………………………

(iv) an 8.

………………………

(4)

Ken rolls a different dice 60 times. This dice also has six faces.

The table gives information about Ken's scores.

Score on dice	Frequency
1	9
2	11
3	20
4	2
5	8
6	10

(b) Explain what you think is different about Ken's dice.

....

....

(1)
(Total 5 marks)

11. Emily has a bag of 20 fruit flavour sweets.

7 of the sweets are strawberry flavour,
11 are lime flavour,
2 are lemon flavour.

Emily takes at random a sweet from the bag.

Write down the probability that Emily

(a)   takes a strawberry flavour sweet,

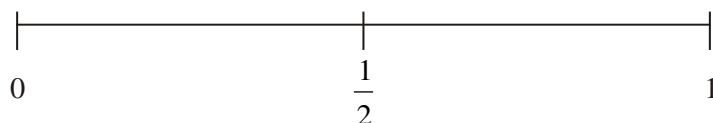..........................(1)

 (b) does **not** take a lime flavour sweet,

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

(c)   takes an orange flavour sweet.

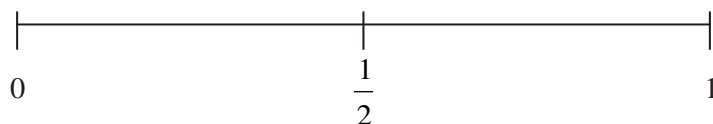..........................(1)
(Total 3 marks)

12. (a)   On the probability scale below, mark with a cross (×)
        the probability that it will rain on at least one day in London in 2008.

```
├─────────────┼─────────────┤
0            1              1
             ─
             2
```

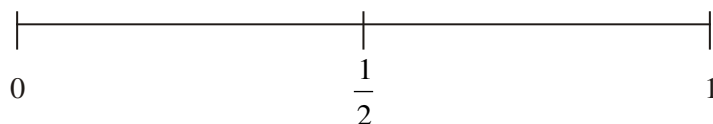**(1)**

 (b) On the probability scale below, mark with a cross (×)
        the probability that you will get a 10 when you roll an ordinary 6-sided
        dice.

```
├─────────────┼─────────────┤
0            1              1
             ─
             2
```

(1)

(c)   On the probability scale below, mark with a cross (×)
        the probability that you will get a head when you throw a coin.

```
├─────────────┼─────────────┤
0            1              1
             ─
             2
```

(1)
(Total 3 marks)