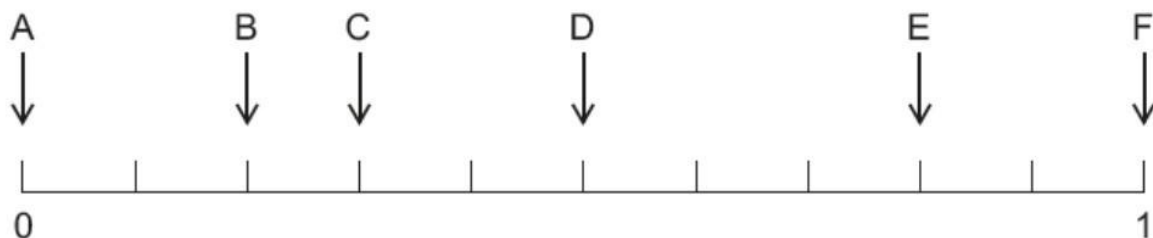


P22- Probability Scale

OCR

- 4 Robert has a bag containing ten sweets.
4 are red, 3 are green, 2 are yellow and 1 is orange.
Robert takes a sweet from the bag without looking.



(a) Which arrow shows the probability he takes a sweet which is

(i) green,

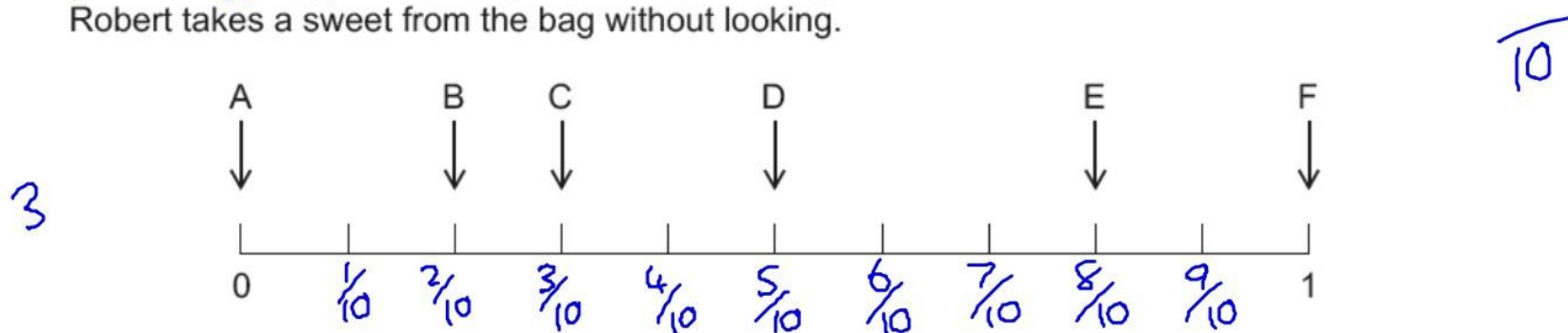
(a)(i) [1]

(ii) blue?

(ii) [1]

(b) Work out the probability that Robert takes a sweet that is **not** orange.

- 4 Robert has a bag containing ten sweets.
4 are red, 3 are green, 2 are yellow and 1 is orange.
 Robert takes a sweet from the bag without looking.



(a) Which arrow shows the probability he takes a sweet which is

(i) green,

$$\frac{3}{10}$$

(a)(i) C [1]

(ii) blue?

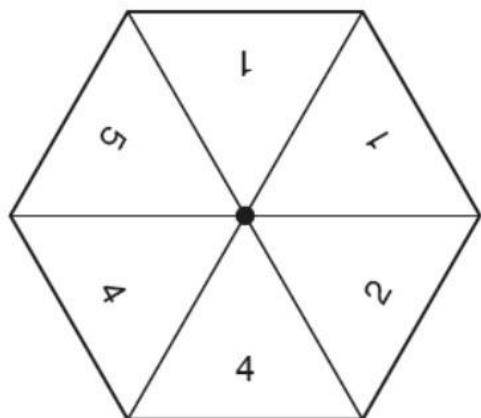
$$\frac{0}{10}$$

(ii) A [1]

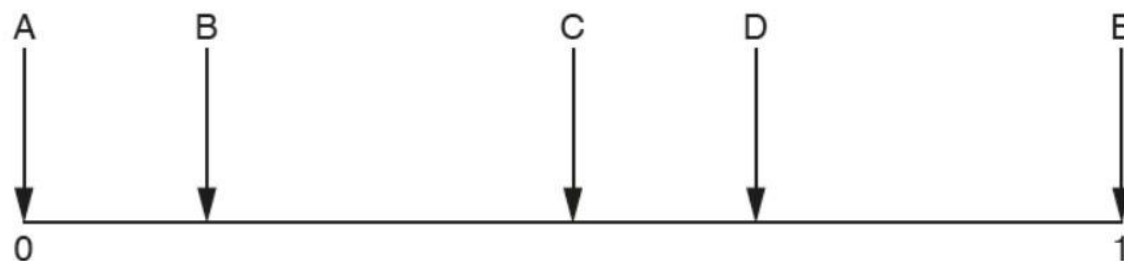
(b) Work out the probability that Robert takes a sweet that is **not** orange.

$$\frac{9}{10} \quad 0.9 \checkmark$$

- 1 A fair spinner has six sides.
They are labelled 1, 1, 2, 4, 4, 5.



The diagram shows a probability scale.



Which arrow shows the probability of

(a) scoring a 2,

(a)[1]

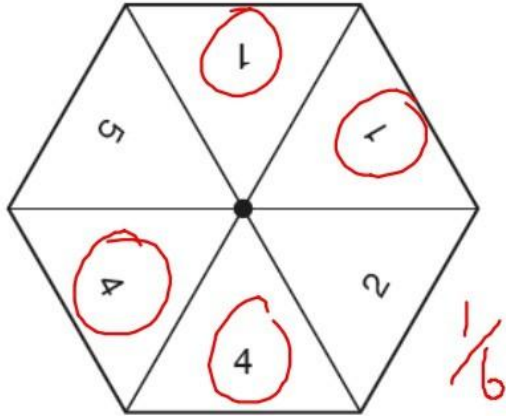
(b) scoring a number less than 6,

(b)[1]

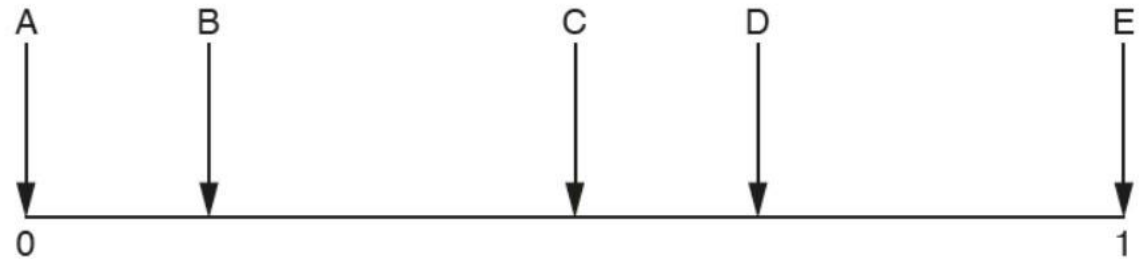
(c) scoring a 1 or a 4?

(c)[1]

- 1 A fair spinner has six sides.
They are labelled 1, 1, 2, 4, 4, 5.



The diagram shows a probability scale.



Which arrow shows the probability of

(a) scoring a 2,

(a) **B** [1]

(b) scoring a number less than 6,

(b) **E** [1]

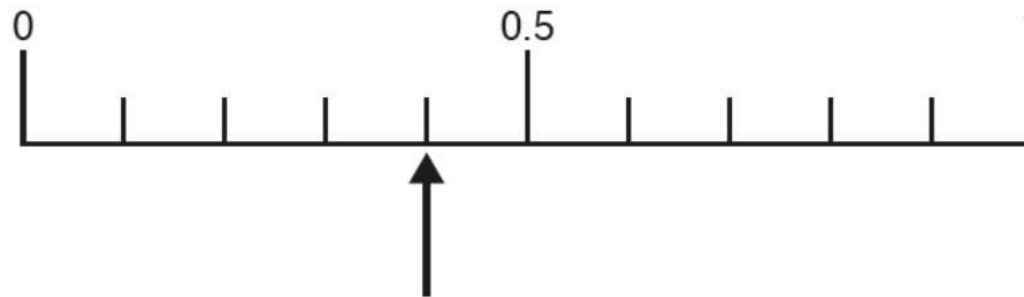
(c) scoring a 1 or a 4?

(c) **D** [1]

$$\frac{4}{6} = \frac{2}{3}$$

- 5 A fair spinner has five sides.
Each side is labelled **A** or **B**.

P22 This diagram shows a probability scale.



The arrow shows the probability that the spinner lands on an **A**.

(a) Circle the word that best describes this probability.

Likely

Impossible

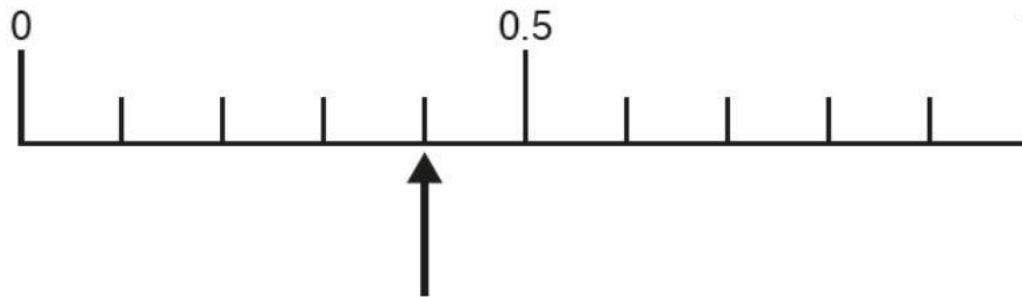
Unlikely

Certain

[1]

- 5 A fair spinner has five sides.
Each side is labelled **A** or **B**.

P22 This diagram shows a probability scale.



The arrow shows the probability that the spinner lands on an **A**.

(a) Circle the word that best describes this probability.

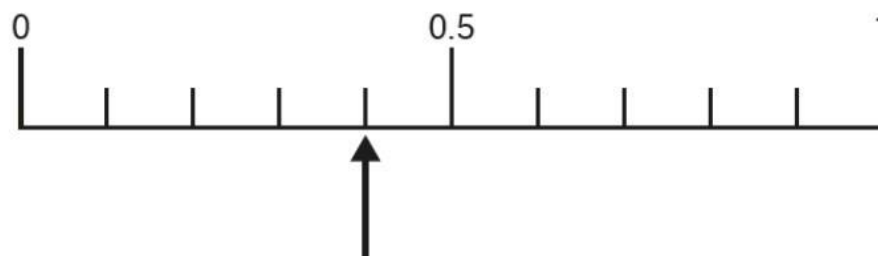
Likely

Impossible

Unlikely

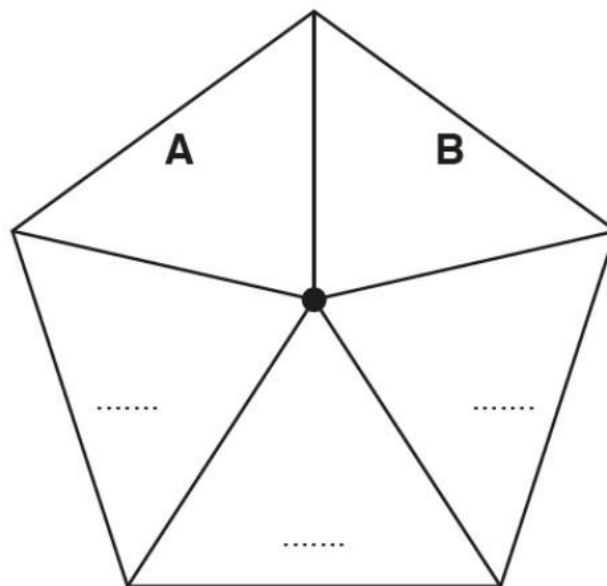
Certain

[1]



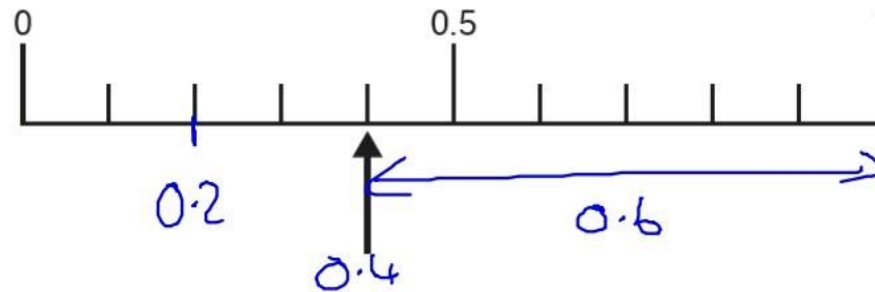
The arrow shows the probability that the spinner lands on an **A**.

(b) Here is the spinner with two sides labelled.



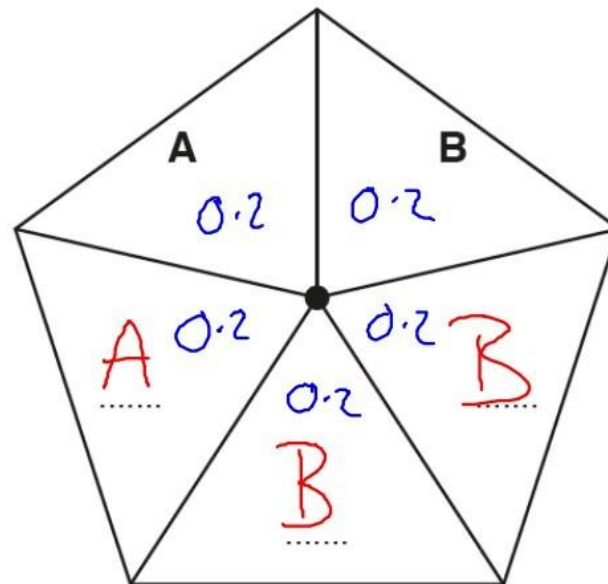
Label the other sides with **A** or **B** to give the correct probability of landing on an **A**.

[2]



The arrow shows the probability that the spinner lands on an **A**.

(b) Here is the spinner with two sides labelled.



0.2

= 1

Label the other sides with **A** or **B** to give the correct probability of landing on an **A**.

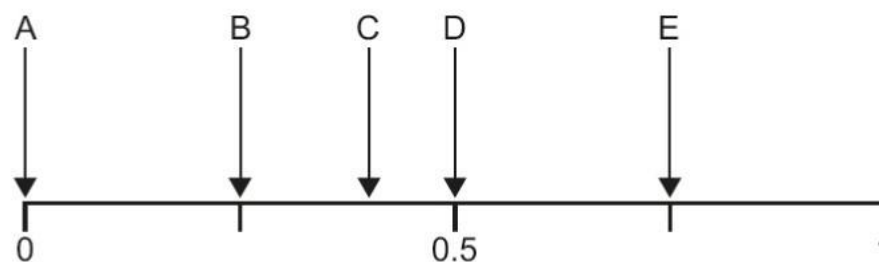
[2]

8 Darren has these 20 crayons in a box:

P22

- 8 blue
- 4 red
- 5 black
- 3 green.

(a) He chooses a crayon at random from the box.



Which arrow shows the probability that this crayon is

(i) blue,

(a)(i) Arrow [1]

(ii) yellow,

(ii) Arrow [1]

(iii) not black.

(iii) Arrow [1]

8 Darren has these 20 crayons in a box:

- 8 blue
- 4 red
- 5 black
- 3 green.

(b) Darren buys 16 more crayons that are either blue or red.
He puts these in the box with the 20 crayons he already has.

He now picks a crayon at random from the box.
The probability that he picks a **blue** crayon is evens.

How many **red** crayons did he buy?

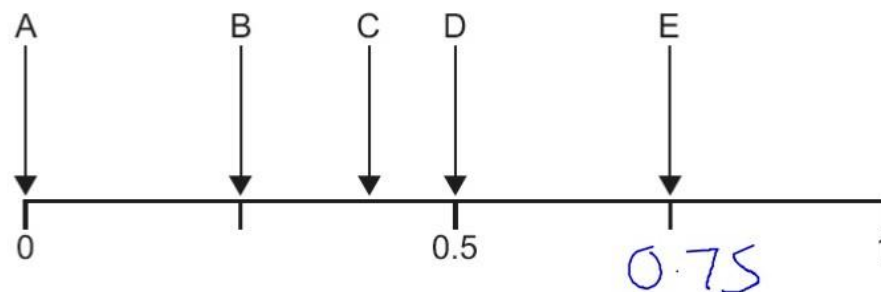
(b) [3]

8 Darren has these 20 crayons in a box:

P22

- 8 blue
- 4 red
- 5 black
- 3 green.

(a) He chooses a crayon at random from the box.



Which arrow shows the probability that this crayon is

(i) blue, $\frac{8}{20} = \frac{4}{10} = 0.4$

(a)(i) Arrow C [1]

(ii) yellow, 0

(ii) Arrow A [1]

(iii) not black. $\frac{15}{20} = \frac{3}{4} = 0.75$

(iii) Arrow E [1]

8 Darren has these 20 crayons in a box:

- 8 blue
- 4 red
- 5 black
- 3 green.

+ 10 blue

Total now is 36

Evens (blue must be 18)

(b) Darren buys 16 more crayons that are either blue or red.
He puts these in the box with the 20 crayons he already has.

He now picks a crayon at random from the box.
The probability that he picks a **blue** crayon is evens.

How many **red** crayons did he buy?

16 added in total
10 blue
then 6 are red

(b)6..... [3]

6 A bag contains 12 counters.

P22 6 are red, 4 are blue and 2 are yellow.

A counter is taken from the bag at random.

Mark with an arrow ($\downarrow$) the probability the counter is

(a) red,

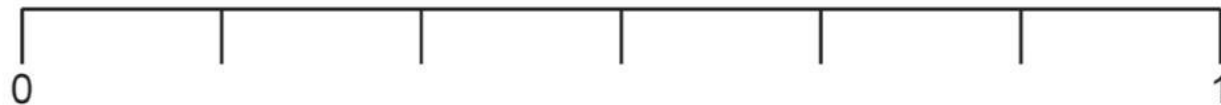


[1]

- 6** A bag contains 12 counters.
6 are red, 4 are blue and 2 are yellow.
A counter is taken from the bag at random.

Mark with an arrow ($\downarrow$) the probability the counter is

(b) yellow,

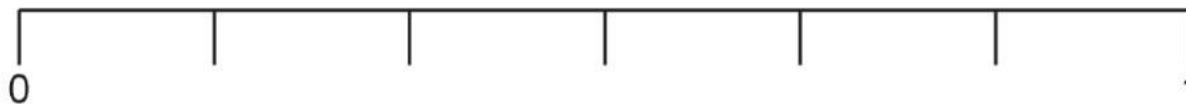


[1]

- 6** A bag contains 12 counters.
6 are red, 4 are blue and 2 are yellow.
A counter is taken from the bag at random.

Mark with an arrow ($\downarrow$) the probability the counter is

(c) green.



[1]

6 A bag contains 12 counters.

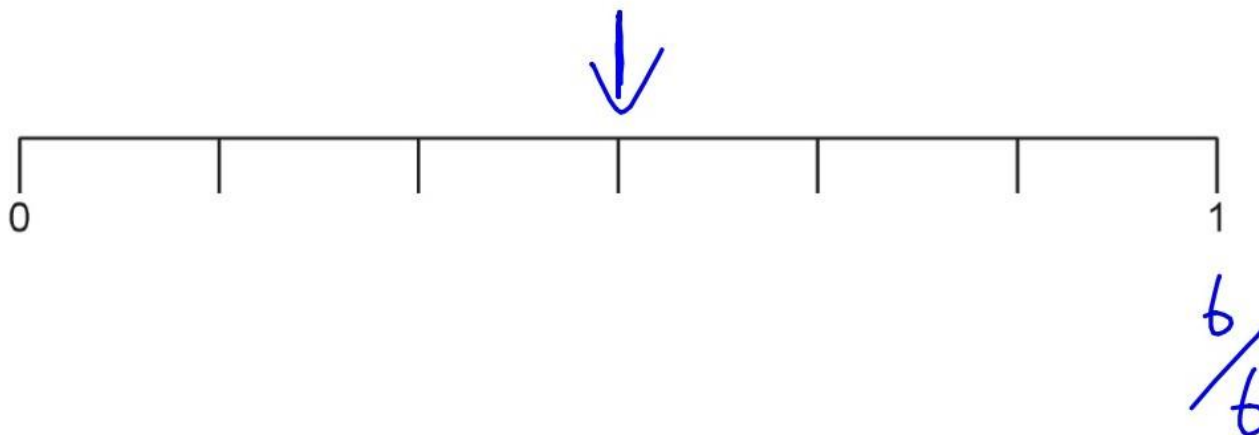
P22 6 are red, 4 are blue and 2 are yellow.

A counter is taken from the bag at random.

Mark with an arrow (↓) the probability the counter is

$$\frac{3}{6} = \frac{6}{12} = \frac{1}{2}$$

(a) red,



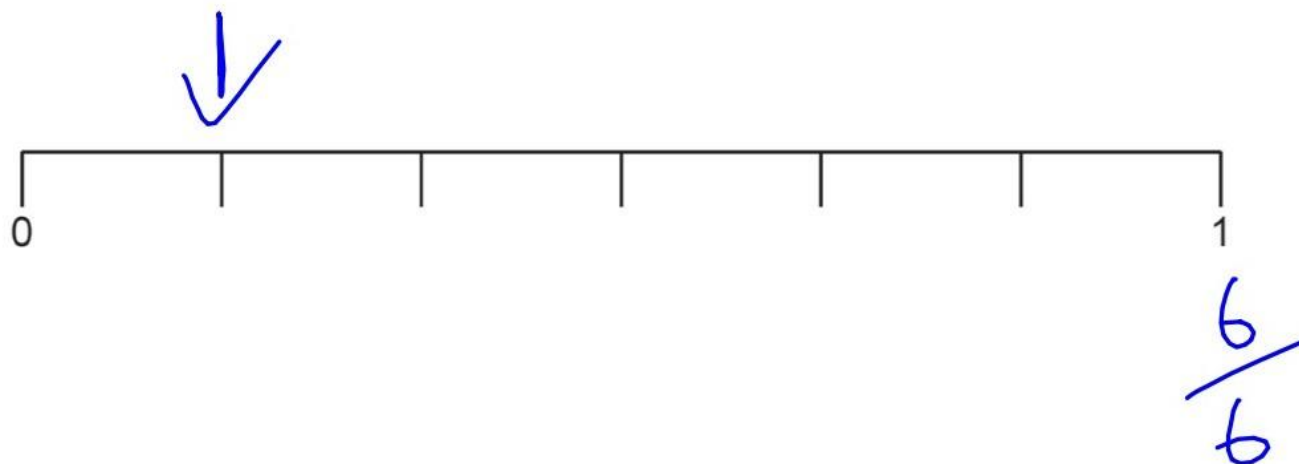
[1]

- 6 A bag contains 12 counters.
6 are red, 4 are blue and 2 are yellow.
A counter is taken from the bag at random.

Mark with an arrow (↓) the probability the counter is

$$\frac{2}{12} = \frac{1}{6}$$

(b) yellow,



[1]

- 6 A bag contains 12 counters.
6 are red, 4 are blue and 2 are yellow.
A counter is taken from the bag at random.

Mark with an arrow ($\downarrow$) the probability the counter is

$$\frac{0}{12}$$

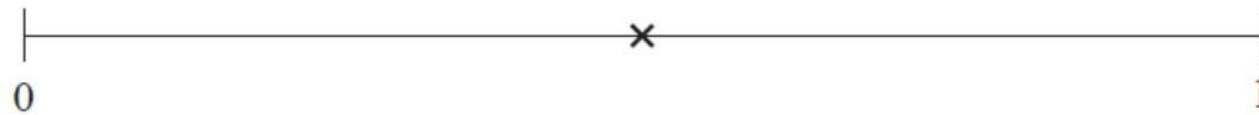
(c) green.



[1]

Edexcel

- 3 The probability of an event is shown by the cross ($\times$) on the probability scale.



Write down an estimate for the probability of the event.

.....

(Total for Question 3 is 1 mark)

- 3 The probability of an event is shown by the cross (×) on the probability scale.



Write down an estimate for the probability of the event.

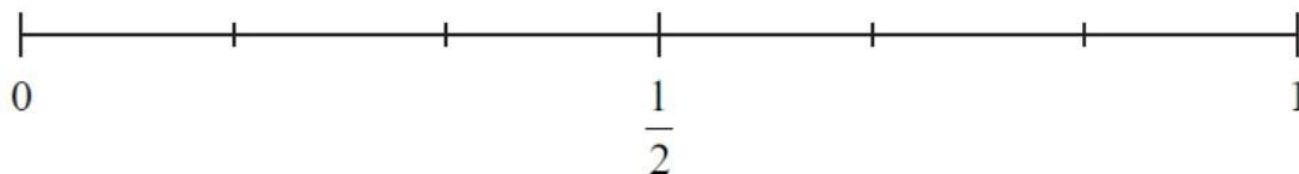
$\frac{1}{2}$ or 0.5

(Total for Question 3 is 1 mark)

4 Lukas has a fair ordinary dice.

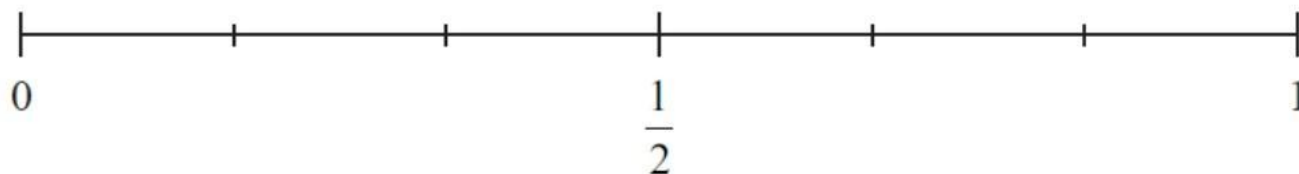
P22 Lukas rolls the dice once.

- (a) On the probability scale below, mark with a cross (×) the probability that Lukas gets an odd number.



(1)

- (b) On the probability scale below, mark with a cross (×) the probability that Lukas gets the number 2



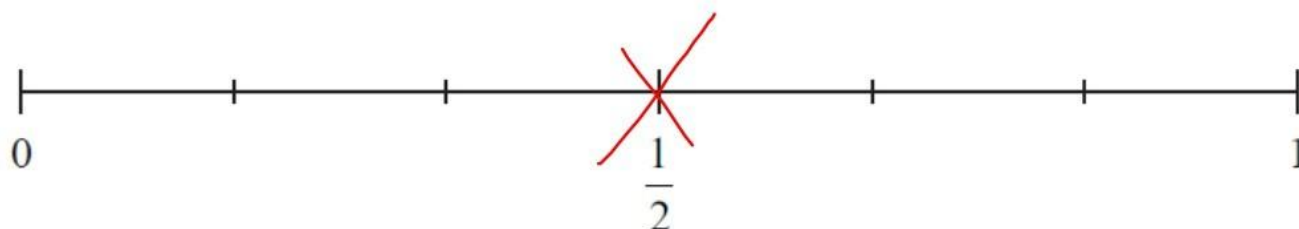
(1)

4 Lukas has a fair ordinary dice.

P22 Lukas rolls the dice once.

1 2 3 4 5 6

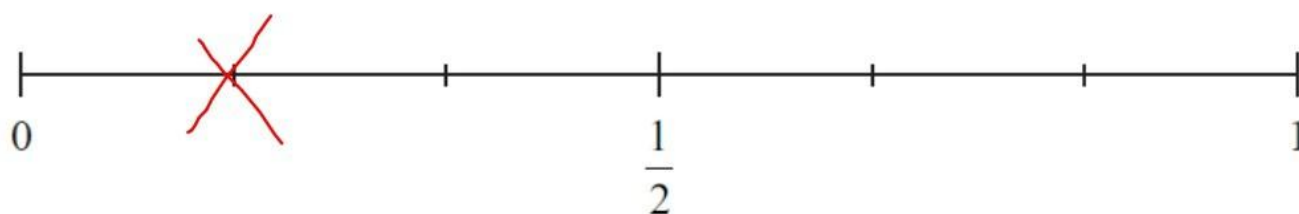
(a) On the probability scale below, mark with a cross (×) the probability that Lukas gets an odd number.



$\frac{3}{6}$
 $\frac{1}{2}$

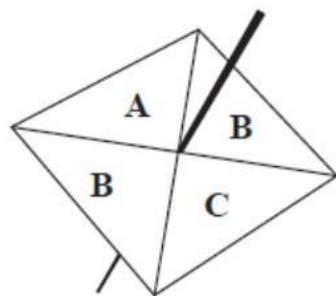
(1)

(b) On the probability scale below, mark with a cross (×) the probability that Lukas gets the number 2

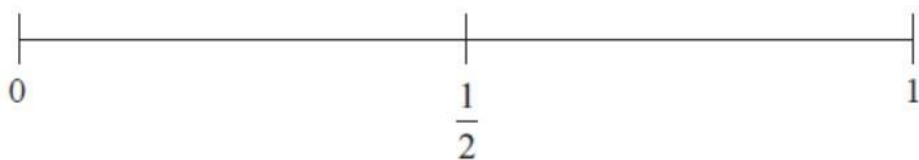


$\frac{1}{6}$
(1)

6 Sammy spins a fair 4-sided spinner.

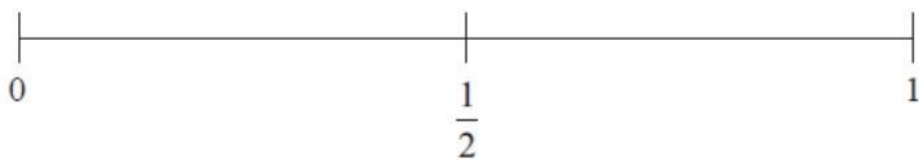


- (i) On the probability scale, mark with a cross ($\times$) the probability that the spinner will land on **B**.



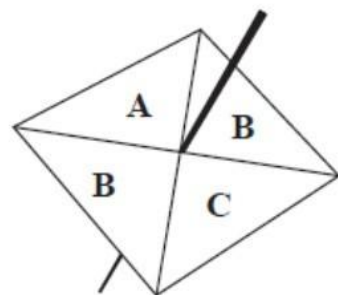
(1)

- (ii) On the probability scale, mark with a cross ($\times$) the probability that the spinner will land on **F**.



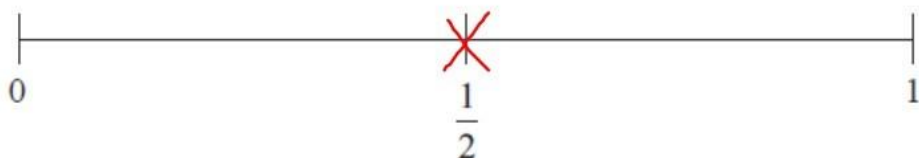
(1)

6 Sammy spins a fair 4-sided spinner.



$$\frac{2}{4} = \frac{1}{2}$$

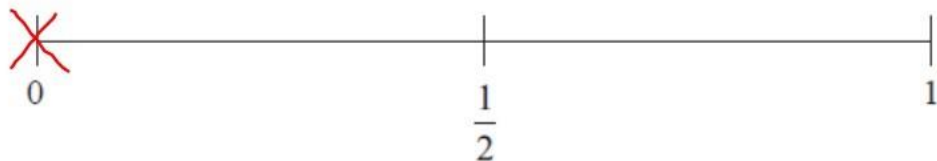
- (i) On the probability scale, mark with a cross (×) the probability that the spinner will land on **B**.



(1)

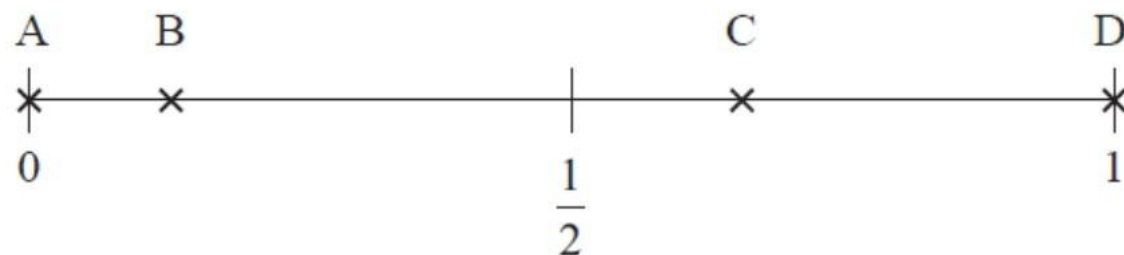
- (ii) On the probability scale, mark with a cross (×) the probability that the spinner will land on **F**.

$$\frac{0}{4}$$



(1)

- 7 Here is a probability scale.
It shows the probability of each of the events A, B, C and D.



- (a) Write down the letter of the event that is certain.

P22

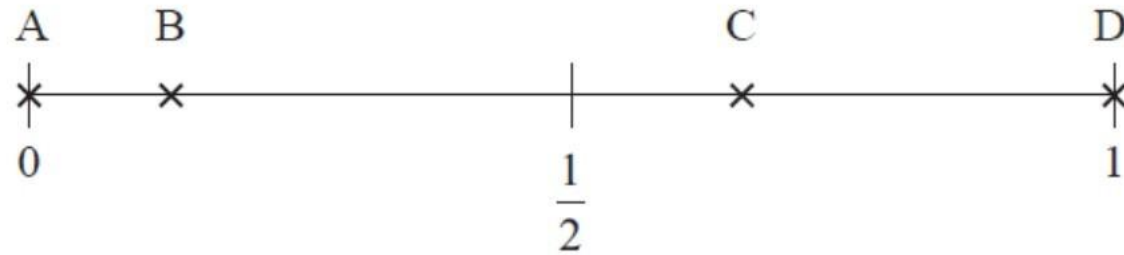
.....
(1)

- (b) Write down the letter of the event that is unlikely.

P22

.....
(1)

- 7 Here is a probability scale.
It shows the probability of each of the events A, B, C and D.



- (a) Write down the letter of the event that is certain.

P22

D

(1)

- (b) Write down the letter of the event that is unlikely.

P22

B

(1)

6 An ordinary fair dice is thrown once.

- (a) On the probability scale below, mark with a cross ($\times$) the probability that the dice lands on an odd number.

P22



- (b) Write down the probability that the dice lands on a number greater than 4

P21

.....
(1)

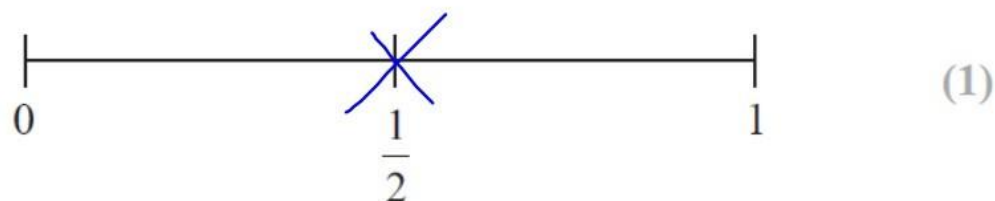
6 An ordinary fair dice is thrown once.

1 2 3 4 5 6

- (a) On the probability scale below, mark with a cross ($\times$) the probability that the dice lands on an odd number.

P22

$$\frac{3}{6} = \frac{1}{2}$$



- (b) Write down the probability that the dice lands on a number greater than 4

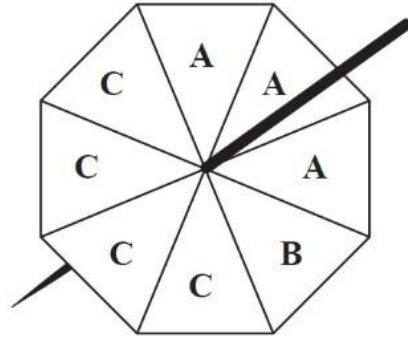
P21

$$\frac{2}{6}$$

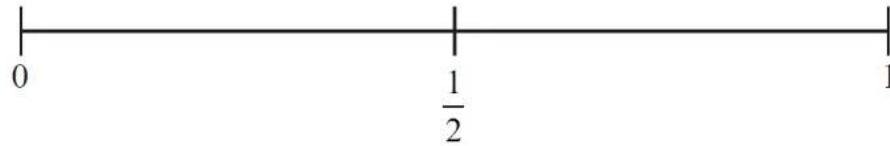
(1)

6 Gita spins a fair 8-sided spinner.

P22

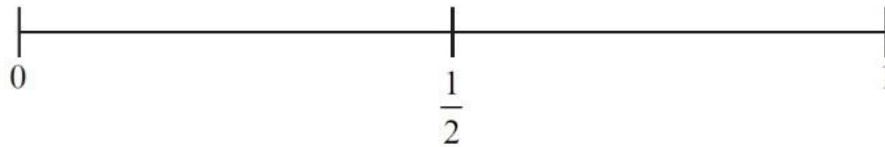


- (a) On the probability scale, mark with a cross (×) the probability that the spinner will land on **C**.



(1)

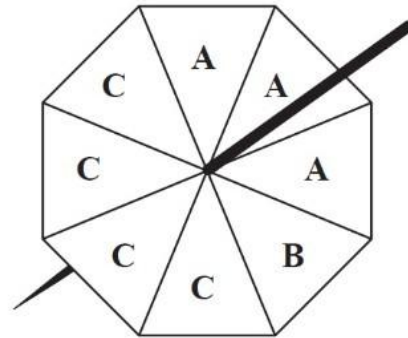
- (b) On the probability scale, mark with a cross (×) the probability that the spinner will land on **D**.



(1)

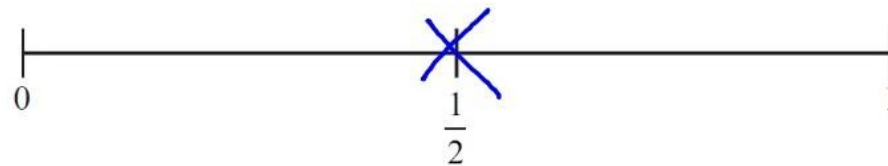
6 Gita spins a fair 8-sided spinner.

P22



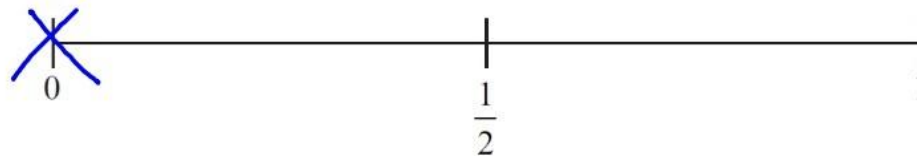
$$\frac{4}{8} = \frac{1}{2}$$

- (a) On the probability scale, mark with a cross (×) the probability that the spinner will land on **C**.



(1)

- (b) On the probability scale, mark with a cross (×) the probability that the spinner will land on **D**.



0/8

(1)

AQA