Cambridge O Level MATHEMATICS (SYLLABUS D) 4024

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Paper 2 Calculator **May/June 2024**

Questions (2)

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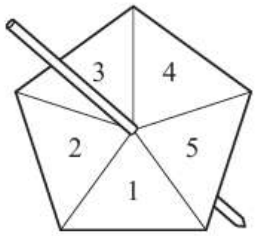

The diagram shows a fair spinner numbered from 1 to 5.
The score is the number the spinner lands on.

(a) The spinner is spun once.

Find the probability that the score is

(i) 3

..... [1]

(ii) even.

..... [1]

(b) The spinner is spun twice.
The two scores are added together.

(i) Complete the possibility diagram to show all the outcomes.

First spin

Second spin	+	1	2	3	4	5
	1	2	3	4	5	6
	2	3	4	5	6	7
	3	4	5	6		
	4					
	5					

[2]

(ii) Find the probability that the outcome is 4.

..... [1]

(iii) Find the probability that the outcome is greater than 6.

..... [2]

Solution:

(a) (i)

sample space for spinner = {1, 2, 3, 4, 5}

As the spinner spun once, so

$$P(\text{score is } 3) = \frac{\text{favourable outcomes}}{\text{Total outcomes}}$$

$$= \frac{1}{5}$$

∴ There is 1 count for 3. total outcomes are 5.

(ii) $$P(\text{score is even}) = \frac{\text{favourable outcome}}{\text{Total outcomes}}$$

$$= \frac{2}{5}$$

∴ There are Two even 2, 4

(b) (i)

First spin

+	1	2	3	4	5
1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10

Second spin

(ii) $P(\text{outcome is } 4) = \dfrac{\text{favourable outcomes}}{\text{total outcomes}}$

$= \dfrac{3}{25}$

(iii) $P(\text{outcome is greater than } 6) = \dfrac{\text{favorable outcomes}}{\text{total outcomes}}$

$= \dfrac{10}{25}$

$= \dfrac{2}{5}$