

LC 2013 (SET D): PAPER 2

QUESTION 2 (25 MARKS)

Question 2 (a)

(i) $P(\text{Green}) = \frac{\text{Number of green sectors}}{\text{Total number of sectors}} = \frac{2}{5}$

$$P(\text{Event}) = \frac{\text{Number of desired outcomes}}{\text{Number of possible outcomes}}$$

(ii) Possible outcomes of 3 successive spins of the spinner:

R: Red; G: Green

RRR

RRG, RGR, GRR

RGG, GRG, GGR

GGG

Question 2 (b)

GGG will yield €3 whereas RRR will yield nothing.

Player wins	€0	€1	€2	€3
Required outcomes	RRR	RRG RGR GRR	RGG GRG GGR	GGG

Question 2 (c)

ANSWER: **Yes**

A Bernoulli trial is an experiment whose outcome is random and can be either of two possibilities: “success” or “failure”.

MARKING SCHEME NOTES

Question 2 (a) [Scale 10C (0, 4, 7, 10)]

- 4:** • Relevant work in one section e.g. states two green sectors or gives GGG as a possible outcome
- 7:** • One section correct
• Substantially correct work in both sections

Question 2 (b) [Scale 10C (0, 4, 7, 10)]

NOTE: Accept answers consistent with candidate’s answers listed in (a)(ii)

- 4:** • One correct or consistent outcome written
- 7:** • One correct outcome for each category
• At least five outcomes in total from a (ii)

Question 2 (c) [Scale 5C (0, 3, 4, 5)]

- 3:** • A correct response without an explanation of some merit
• An incorrect response but some merit in the explanation
- 4:** • A correct response with one aspect of the explanation correct
• An incorrect response with a correct explanation