

Phase 7 Ideas of Chance and Uncertainty Assessment

| Phase 7 Progression Overview | Assessment Note | Marks |
|--|------------------------|--------------|
| I can analyse and explain results of simple experiments involving chance. e.g. When creating a tombola what are the chances that the customer will win a prize? | Question 1 | 2 |
| I can plan and conduct repeated simple experiments of chance and record findings to determine which outcome is likely | Question 2 | 3 |
| I can use probability to explain fairness in mathematical terms. | Question 3 | 3 |
| I can use language of probability to describe the likelihood of a simple event. e.g. equal chance, 50/50, a one in three chance. | Question 4 | 3 |
| Design a probability device such as a die, spinner or a bag of coloured beads to produce a specified order of probability. | Question 5 | 4 |
| TOTAL MARKS | | /15 |

| | Question | Mark |
|---|---|------|
| 1 | <p>I can analyse and explain results of simple experiments involving chance. e.g. When creating a tombola what are the chances that the customer will win a prize?</p> <p>A school fair has a tombola with 30 tickets. Ten of the tickets win a prize. If you buy one ticket, what is the chance that you will win? Explain how you know.</p> | 2 |
| 2 | <p>I can plan and conduct repeated simple experiments of chance and record findings to determine which outcome is likely</p> <p>You have a coin.</p> <p>Describe how you would carry out a fair experiment to find out whether heads or tails is more likely.</p> <p>Explain how many times you would flip the coin, how you would record your results, and how you would decide which outcome is most likely.</p> | 3 |
| 3 | <p>I can use probability to explain fairness in mathematical terms.</p> <p>A class is running a raffle where every pupil pays £1 and receives one ticket. There are 25 pupils and 25 tickets, each with a different number. The teacher says the raffle is fair.</p> <p>Explain, using probability, why this raffle is fair. Then describe one change that would make the raffle unfair and explain why?</p> | 3 |

4

I can use language of probability to describe the likelihood of a simple event. e.g. equal chance, 50/50, a one in three chance.

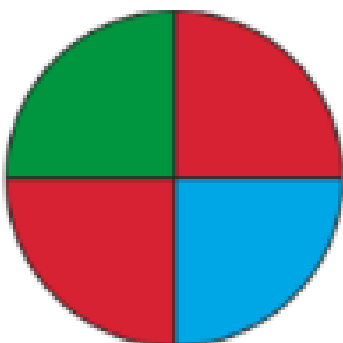
- a.) You roll a standard dice. What is the likelihood of rolling a 3? Describe it using probability words such as *unlikely, likely, equal chance, 50/50, or one in six*
- b.) A bag contains 3 red counters, 3 blue counters and 3 yellow counters. You take one counter out without looking. Describe the likelihood of picking each colour using probability words such as *equal chance, likely, unlikely, 50/50, or one in three.*
- c.) A basketball player takes one shot from the free-throw line. Use probability words to describe how likely it is that they will score.

3

5

Design a probability device such as a die, spinner or a bag of coloured beads to produce a specified order of probability.

- a.) Look at the spinner below. Use probability language to describe which colour is most likely to be landed on and which is least likely.



b.) Look at the three dice faces below. Each one is designed differently. Which dice would give the highest chance of rolling a 6? Which would give the lowest? Explain your answer using probability language.

Dice A: [1] [2] [3] [4] [5] [6]

Dice B: [6] [6] [3] [4] [1] [2]

Dice C: [6] [6] [6] [1] [2] [3]