Probability topic test

Name: _____ Date: _____

12 questions | 20 marks | 30 minutes

Possible outcomes, likelihood, repeated trials and observed results.

No calculator needed.

1. List every possible top number of a normal six-sided die. [1 mark]

2. List the possible colour outcomes from the supplied bag. [1 mark]

Six same-sized counters in a bag; choose without looking

Colour	Number of counters
Red	3
Blue	2
Green	1

3. The bag has six counters. Does that mean six different colour outcomes? Explain. [2 marks]

Six same-sized counters in a bag; choose without looking

Colour	Number of counters
Red	3
Blue	2
Green	1

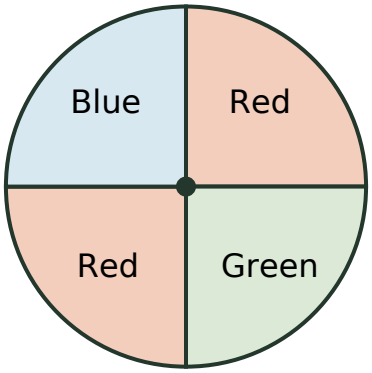
4. Which colour is most likely when one counter is selected without looking? [1 mark]

Six same-sized counters in a bag; choose without looking

Colour	Number of counters
Red	3
Blue	2
Green	1

5. Which two colours have equal chances on the supplied fair spinner? [1 mark]

Four equal sectors



Assume each sector is equally likely.

6. A pupil says red is certain because it has the most counters. Explain why that is wrong. [2 marks]

Six same-sized counters in a bag; choose without looking

Colour	Number of counters
Red	3
Blue	2
Green	1

7. A coin experiment records 9 heads and 11 tails. How many trials are recorded? [1 mark]

8. There are 24 recorded spins: 7 blue, 5 green and the rest red. Find the red frequency. [2 marks]

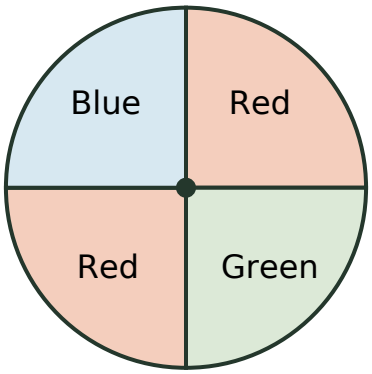
9. A bag has 5 red and 3 blue same-sized counters. How many blue counters should be added to make the two colours equally likely? [2 marks]

10. You want ten trials with an unchanged bag. What should happen after each counter is selected and its colour recorded? [2 marks]

11. One group gets 2 successes in 5 trials. Another gets 8 in 20. Compare the observed shares. [2 marks]

12. A game uses the supplied fair spinner. A player wins on red and loses on blue or green. [3 marks]

Four equal sectors



Assume each sector is equally likely.

(a) How many equal sectors give a win? [1 mark]

(b) Are winning and losing equally likely? Explain using the sectors. [2 marks]