Probability - topic test

Name: _____ Date: _____

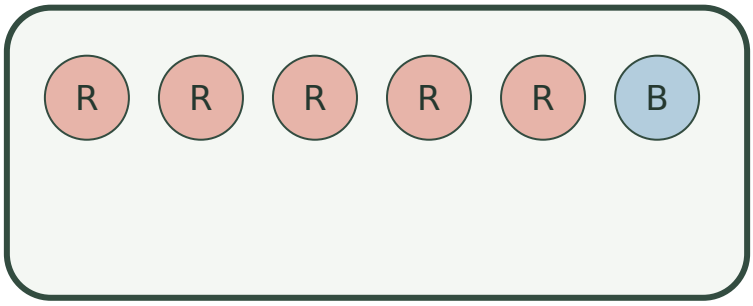
12 questions | 21 marks | 30 minutes

Begin with familiar ideas, then explain and apply your understanding. Show your working.

No calculator needed.

1. A bag has five red and one blue equal-sized ball. Which colour is more likely on a random draw? [1 mark]

Equal-sized balls in a mixed bag



R = red, B = blue, G = green

2. The bag in this question contains only red and blue balls. Describe the chance of drawing green. [1 mark]

3. A box contains only white counters. Describe the chance of drawing white. [1 mark]

4. A fair coin has heads and tails. Compare their chances. [1 mark]

5. Order these from least to most likely: likely, impossible, certain, unlikely. [2 marks]

6. A bag has three red and two blue balls. One red is kept out. State the remaining contents. [2 marks]

7. A bag starts with three red and two blue balls. One red ball is drawn and kept out. Does that draw affect the chances of the next draw? Explain. [2 marks]

8. A drawn counter is returned and the bag is mixed. Do the colour counts change before the next draw? [2 marks]

9. Count the heads and tails in this record: H, H, T, H, T, T, H, T, H, T. [2 marks]

10. Ten tosses of a fair coin produce seven heads. Must the next toss be tails? Explain. [2 marks]

11. Two groups each make ten fair-coin tosses. One records 4 heads and the other 6 heads. Explain why both records may be correct. [2 marks]

12. Design a fair bag game where red wins and blue loses. State the contents and how to draw. [3 marks]