Max’s Probability Puzzles

Learning objective: To calculate and compare probabilities of events using fractions and identify the likelihood of outcomes.

Help Max the monkey solve these probability puzzles! Read each question carefully and choose the correct answer or provide the requested word.

Answer Key: 1. A (1/6), 2. False, 3. Even chance, 4. C (0), 5. True, 6. Unlikely, 7. 3/8, 8. True, 9. 1/2, 10. Impossible. (Note: For question 7, 3/8 is the probability of picking a blue marble if there are 3 blue and 5 red).

Word bank: impossible · certain · likely · unlikely · even chance · fraction

1. Max rolls a standard six-sided dice. What is the probability of rolling a 4? A) 1/6* B) 1/4 C) 4/6 D) 1/2 (1 mark)

2. True or False: If you flip a fair coin, it is certain to land on heads. (1 mark)

3. If a bag contains 5 red balls and 5 blue balls, what is the probability of picking a red ball? (Use the term: even chance) (1 mark)

4. Max has a bag of only yellow marbles. What is the probability of pulling out a green marble? A) 1 B) 1/2 C) 0* D) 1/10 (1 mark)

5. True or False: An event with a probability of 1 is certain to happen. (1 mark)

6. There are 20 chocolates in a box. 1 is a lime flavour, and 19 are strawberry. Is it likely or unlikely to pick the lime one? (1 mark)

7. A bag has 3 blue marbles and 5 red marbles. What is the probability of picking a blue marble as a fraction? (1 mark)

8. True or False: If it is impossible for an event to occur, its probability is 0. (1 mark)

9. Max spins a spinner with two equal sections, one red and one blue. What is the probability of landing on blue? (Write as a fraction) (1 mark)

10. Max tries to jump over the moon. Using probability language, what is the likelihood of this happening? (1 mark)

Draw: Draw Max the monkey holding a bag of marbles and a spinner, surrounded by colourful shapes representing different probability outcomes.

Extension challenge: Max has a bag with 10 sweets: 2 are fizzy, 5 are chewy, and 3 are minty. If Max picks one sweet at random, which flavour is he most likely to pick and why?