Worked answers | Probability

Numerical likelihood

6 questions | 11 marks

Equivalent correct methods earn the corresponding marks.

1. What probability describes a certain event? [1 mark]

One represents the whole set of possible outcomes.

Answer: 1.

2. A bag contains 4 green and 6 yellow matching tokens. Find the probability of green. [2 marks]

There are 10 tokens in total and 4 favourable tokens.

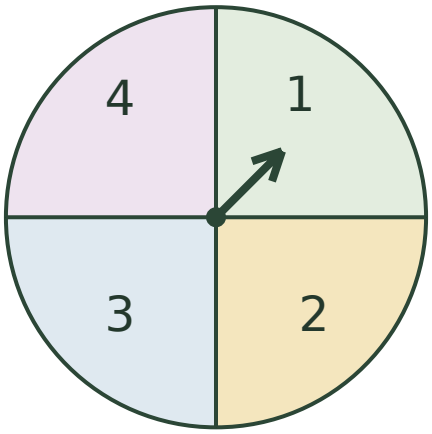
Answer: $\frac{4}{10} = \frac{2}{5}$.

3. Find the probability of an odd result on a fair six-sided die. [2 marks]

Odd faces are 1, 3 and 5: three of six faces.

Answer: $\frac{3}{6} = \frac{1}{2}$.

4. Using the equal-sector spinner, find the probability of a number less than 3. [2 marks]



The favourable sectors are 1 and 2.

There are four equal sectors.

Answer: $\frac{2}{4} = \frac{1}{2}$.

5. A bag contains only red tokens. Find the probability of not selecting red. [2 marks]

Every possible token is red; there are no favourable tokens for not red.

Answer: 0.

6. A spinner has one large sector and one small sector. Can you decide that each sector has probability one half just because there are two labels? Explain. [2 marks]

Equal label counts do not make unequal-sized sectors equally likely.

The sector sizes and spinner model must be considered.

Answer: No.