Observed frequencies

6 questions | 9 marks

Equivalent correct methods earn the corresponding marks.

1. How many trials are recorded in the supplied spin table? [1 mark]

Example results from 30 spins

Colour	Frequency
Red	14
Blue	9
Green	7

$14 + 9 + 7 = 30$.

Answer: 30.

2. Which colour occurred least often in that table? [1 mark]

Example results from 30 spins

Colour	Frequency
Red	14
Blue	9
Green	7

Its frequency, 7, is smaller than 9 and 14.

Answer: Green.

3. A record shows Win 8 and Lose 12. How many trials are recorded, and which outcome is more frequent? [2 marks]

$8 + 12 = 20$.

12 is greater than 8.

Answer: 20 trials; Lose is more frequent.

4. A coin record shows 12 heads and 8 tails. How many more heads than tails occurred? [1 mark]

Example results from 20 tosses of a fair coin

Outcome	Frequency
Heads	12
Tails	8

$12 - 8 = 4$.

Answer: 4.

5. Group A records red 3 times in 10 trials. Group B records red 15 times in 50 trials. Compare their observed shares. [2 marks]

Multiplying 3 and 10 by five gives 15 and 50.

Answer: The shares are equal.

6. A hidden spinner gives blue 9 times in 10 spins. Can you be certain it has nine blue sectors out of ten? Explain. [2 marks]

Different spinner designs could produce that record.

Inspect the device or collect more evidence before making a stronger claim.

Answer: No. A short trial record does not show the exact sector arrangement.