Practice worksheet | Probability

Digital simulations and explaining differences from predictions

Name: _____ Date: _____

6 questions | 15 marks

1. Which rule models a fair die: =RANDBETWEEN(0,6) or =RANDBETWEEN(1,6)? Explain. [2 marks]

2. Describe a random-integer model for a fair coin using integers 1 and 2. [2 marks]

3. Use the supplied table. Find the relative frequency of 6 in the 60-trial run. [2 marks]

Supplied example die-simulation records; each row is a separate run

Trials	1	2	3	4	5	6
60	7	12	9	13	8	11
600	101	98	95	107	103	96

4. For the 600-trial run, state observed and expected six counts, and their difference. [3 marks]

Supplied example die-simulation records; each row is a separate run

Trials	1	2	3	4	5	6
60	7	12	9	13	8	11
600	101	98	95	107	103	96

5. A model chooses 1 to 10 equally and labels 1 to 4 as green. Find green chance and expected greens in 50 trials. [3 marks]

6. A simulation estimate is 0.6 for an event with theoretical chance 0.5. Must its coding be wrong? State one check and one alternative explanation. [3 marks]