Practice worksheet | Probability

Compound-event simulations and describing results

Name: _____ Date: _____

6 questions | 16 marks

1. Map equally likely digits 0-9 to $P(\text{blue}) = 0.4$ and $P(\text{red}) = 0.6$. [2 marks]

2. Two tokens are drawn without replacement in a trial. When is the full bag restored for repeated trials? [2 marks]

3. Why does a uniform random integer from 2 to 12 not simulate a fair two-dice sum? [3 marks]

4. Use the table to estimate $P(\text{at least one head})$. [2 marks]

Original practice simulation: 24 trials of two fair coins

Outcome	Count
HH	5
HT	7
TH	6
TT	6

5. A student deletes all TT trials as uninteresting. Explain the problem. [3 marks]

6. Describe a reproducible simulation of two dice and sum 7, including a check. [4 marks]