

Probability Basics

Name:

Date:

INQUIRY

Korean Yut Nori is a traditional board game using 4 sticks. Each stick can land flat or round. Is every outcome equally likely?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

| Term | Definition |
|----------------|--|
| Probability | How likely an event is. Ranges from 0 (impossible) to 1 (certain). |
| Equally likely | Each outcome has the same chance. |
| Sample space | All possible outcomes. |

Part A — Probability Scale

1. Place on a probability scale (0 to 1): (a) rolling a 6 on a die (b) the sun rising tomorrow (c) it snowing in Nanjing in July (d) flipping heads. [4 marks]

Part B — Calculating

2. A bag has 3 red, 5 blue, and 2 green marbles. Find $P(\text{red})$, $P(\text{blue})$, $P(\text{green})$, $P(\text{not red})$. [4 marks]

Show your working:

3. A standard die is rolled. Find: $P(\text{even})$, $P(\text{greater than } 4)$, $P(\text{prime})$. [3 marks]

Show your working:

Part C — Application

4. In Yut Nori, each of 4 sticks has 2 sides (flat/round). List all possible numbers of flat sides (0,1,2,3,4). Are they equally likely? Explain why or why not. [4 marks]