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Probability

Student Worksheet

Questions & Working Space

IGCSE Mathematics

Name: _____

Date: _____

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Note

How to use this worksheet. These questions are built *strictly* on the *Probability* notes: key definitions and the probability scale, theoretical and experimental probability, expected frequency, complementary events, the Addition Rule, the Multiplication Rule, sample space diagrams, tree diagrams (with and without replacement), Venn diagrams and set notation, and conditional probability.
Working space. Ruled lines are provided after each question — show *all* of your working there, draw diagrams where asked, and give fractions in simplest form. Harder questions have a teal **Hint** box; try the question first and use the hint only if you are stuck.
Checking your answers. Full step-by-step solutions, a marking scheme for the exam paper, and a quick answer key are in the separate booklet *"Probability — Solutions & Answer Key."* Try each question honestly before you look.

1 Part I — Topic-by-Topic Exercises

1.1 Key Definitions and the Probability Scale

Exercise K1 *[Basic]*

A fair eight-sided spinner is numbered 1 to 8. Write down

(a) the sample space S

(b) $n(S)$

(c) the outcomes in the event "spinning a multiple of 3"

Exercise K2 *[Basic]*

Describe each of the following as impossible, unlikely, even chance, likely or certain:

(a) an event with probability 0.9

(b) an event with probability 0

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(c) an event with probability $\frac{1}{2}$

Exercise K3 *[Standard]*

A student states that the probability of a certain event is 1.4. Explain why this must be wrong.

Exercise K4 *[Standard]*

Explain, in your own words, the difference between an *outcome* and an *event*, using the roll of a standard six-sided die as your example.

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Preview ends here

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