

Learner workbook: Sample spaces and systematic lists

Objective: List outcomes systematically and calculate probabilities from sample spaces.

Calculator condition: Non-calculator core; calculator optional only for checking where labelled.

L050 Sample spaces and systematic lists



Objective: List outcomes systematically and calculate probabilities from sample spaces.

Connect & Check

- State the objective and timeline. Retrieve probability and expected frequency or a prerequisite. Diagnose a common error before modelling.
- Write one starting question you want answered today.

Choose your route

Route A: Visual Use a diagram, graph, table or annotation first.	Route B: Method Use a worked method, formula or calculation chain first.	Route C: Explain Start with words: what is known, what is changing, and why.
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Share

- Pairs compare methods or predict a result for sample spaces and systematic lists. Ask for a reason, not only an answer.

Present

- Construct a table or tree; check that outcomes are exhaustive and equally likely

Apply: supported to independent

Recall: Retrieve the key fact or method needed for sample spaces and systematic lists.

Working: _____

Check/explanation: _____

Core practice: Two fair dice are rolled. Count the outcomes with a sum of 9 and find the probability.

Working: _____

Check/explanation: _____

Reasoning: A learner lists (1,3) and (3,1) as one outcome when two distinct dice are rolled. Explain the effect.

Working: _____

Check/explanation: _____

Exam-style: Solve an exam-style problem involving sample spaces and systematic lists. Show working, include a check and interpret your answer.

Working: _____

Check/explanation: _____

Recall & Review

- Revisit the objective. Learners solve a fresh item without prompts, explain a check, correct one error and record the next practice.

WWW: _____ EBI: _____

Recall & Review: feedback and extension integration

Lesson L050: Sample spaces and systematic lists

Objective: List outcomes systematically and calculate probabilities from sample spaces.

Timing for a 60-minute lesson

0-7 Connect & Check; 7-14 Share; 14-25 Present/model; 25-44 Apply route choice/practice; 44-52 independent exam-style check; 52-60 Recall & Review, WWW/EBI and next step.

Recall & Review evidence

At the end of the lesson, solve a fresh question without prompts, explain one check, correct one error and record the next practice step.

What Went Well (WWW)

I represented the outcomes systematically, used the correct probability rule and checked that the probabilities or frequencies were consistent.

Even Better If (EBI)

I will show the sample space, branch or set reasoning explicitly, state any dependence or condition and check totals before giving the final probability.

Integrated stretch and deep challenge

Stretch: Two fair dice are rolled. Count the outcomes with a sum of 9 and find the probability.

Deep challenge: A learner lists (1,3) and (3,1) as one outcome when two distinct dice are rolled. Explain the effect.

My next-step response
