

Learner workbook: Dependent events and assumptions

Objective: Recognise dependence and the assumptions behind a probability model.

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

L074 Dependent events and assumptions



Objective: Recognise dependence and the assumptions behind a probability model.

Connect & Check

- State the objective and timeline. Retrieve probability trees and combined events 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 dependent events and assumptions. Ask for a reason, not only an answer.

Present

- Foundation: simple experiments and frequency models.
- Higher: without-replacement trees and conditional probability

Apply: supported to independent

Recall: Retrieve the key fact or method needed for dependent events and assumptions.

Working: _____

Check/explanation: _____

Core practice: A bag holds 5 red and 4 blue. Find $P(\text{two blue without replacement})$.

Working: _____

Check/explanation: _____

Reasoning: A bag has 4 red and 1 blue. Given the first draw was red, find $P(\text{second red without replacement})$.

Working: _____

Check/explanation: _____

Exam-style: Solve an exam-style problem involving dependent events and assumptions. 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 L074: Dependent events and assumptions

Objective: Recognise dependence and the assumptions behind a probability model.

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: A bag holds 5 red and 4 blue. Find $P(\text{two blue without replacement})$.

Deep challenge: A bag has 4 red and 1 blue. Given the first draw was red, find $P(\text{second red without replacement})$.

My next-step response
