

L049 · GCSE Mathematics 1MA1 · 60 minutes

The goal

Use the probability scale and calculate expected frequency.

Connect & Check

Complete the starter in your workbook. Retrieve the prior skill, then identify one likely error before you use today's method.

L049 Probability and expected frequency

Collect

Represent

Analyse

Conclude

Is the sample fair?

What does the diagram show?

What conclusion is valid?

Objective: Use the probability scale and calculate expected frequency.

Compare your method with a partner. Agree on one reliable step and one check.
Be ready to explain your reasoning, not just your answer.

Build the method

Use the worked model to connect equally likely outcomes with long-run expectation; distinguish expectation from certainty. Record the key step and one check that proves the answer.

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Choose your route

Choose your route: A - visual model, B - method first, or C - explain first.
Whichever route you choose, your final answer must prove the lesson objective.

Guided practice

A biased coin shows heads 78 times in 120 tosses. Estimate heads in the next 400 tosses.

Apply

L049 Probability and expected frequency

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Is the sample fair?

What does the diagram show?

What conclusion is valid?

Objective: Use the probability scale and calculate expected frequency.

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Independent practice

Why is an expected frequency of 26 not a guarantee of exactly 26 successes?

Apply

L049 Probability and expected frequency

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Exam-style practice

A probability problem is presented with two stages. Complete the representation, calculate the probability and explain any assumption.

Recall & Review

Complete a fresh question without notes. Check your answer, correct one error if needed, and record the next practice step.

Before next lesson

Correct one error, record one target and complete the flipped learning task.

L049 Recall & Review

Probability and expected frequency

Fresh evidence: prove the objective

Solve a new question without prompts. Explain one check, then correct one error in your working.

Objective: Use the probability scale and calculate expected frequency.

Write the next practice step before you leave. It must test the method again, not simply copy today's example.

Feedback language

Use the full phrases before the abbreviations.

What Went Well (WWW)

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

Identify the mathematical method, representation, reasoning or check that improved.

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.

Set one precise next-step action and test it on a fresh question.

Extension route

Choose this route only after the core evidence is secure.

Stretch

A biased coin shows heads 78 times in 120 tosses. Estimate heads in the next 400 tosses.

Deep challenge

Why is an expected frequency of 26 not a guarantee of exactly 26 successes?

Explain your reasoning clearly enough that another learner could check it.