

Y1 BINOMIAL EXPANSIONS: TEACHER INSTRUCTIONS

Objective

- Understand and use the binomial expansion of $(ax + b)^n$ for positive integer n .

Task Link

- parkermaths.com/y1binomial

Commentary

This is a new topic for most students. However, given the procedural nature of most basic questions on this topic, it lends itself well to independent study.

Students generally have no trouble performing basic binomial expansions or finding coefficients with minimal or no teacher input.

Following this task, a brief starter to practise the skills is usually enough to refresh students' memories and enable the starting point for the topic to be much further advanced.

The topic is introduced such that students initially perform binomial expansions using Pascal's triangle, before advancing onto using the formula to find expansion where the power is sufficient large that using Pascal's triangle would be an inefficient method.

Task Instructions

Part 1: Notes and Examples

Provide students with a copy of printed notes sheet (Binomial Expansions).

- Direct students to the 'task link' at the top of the sheet.

The task contains a sequence of key facts, example-problem pairs and quickfire questions. For each example, students should complete the following four-step process

- Watch the example, adding any annotations the student finds useful.
- Attempt the paired problem.
- Check the solutions against the video.
- If the student has an incorrect answer, they should watch the remaining part of the video to correct their solution.

Part 2: DFM Key Skills

Note: The task below requires students to have a [Dr Frost Maths](#) account. Tutorials are available on the Dr Frost Maths site using the '?Get Help' buttons.

DFM key skills allow repeated practice of fine-grained skills using randomly generated questions. Upon entering an answer, students are provided with a detailed model solution. As the questions are randomly generated, students can continue practising until fluency is achieved.

Set the following [key skills](#):

- Binomial expansion of $(ax \pm b)^2$, where a is a positive integer.
- Determine the value of a coefficient in a binomial expansion with a positive integer power.

Warn when Wrong:

Prevent Reattempts:

Require Working:

Require Videos:

Time Limit:

Set:

Interleave Skills:

Hide skill name:

Completion:

out of the last questions

The progress of students can be checked in the DFM 'progress by class' interface.

Students can ask questions and feedback can also be provided on a question by question basis.

Extra Notes

Further information on flipped learning can be found in my [guide to flipped learning](#).

If have any questions or you try the task and have suggestions for improvement, please get in touch:

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