

LCOL Algebra 3 — Multiplication Of Algebraic Expressions

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ON THE LCOL PAST PAPERS · Examined in 4 question-parts, 2015-2025 (main sittings) | 2025: P1 Q3(c)(ii) · 2023: P1 Q6(b) · 2018: P1 Q6(a) · 2015: P1 Q3(a)

How to use this sheet: these are the exact questions worked in this tutorial, in order. Try each one yourself first — the time it is posed in the video is shown, so you can pause before Paul solves it. Final answers are at the back; the full method is in the video.

Worked examples (in the video)

Example 1. Multiply out $3x(5x + 6y - 12)$. (worked 00:15-03:19).

Example 2. Multiply out $(3x + 7)(2x^2 - 7y)$. (worked 03:19-08:00).

Example 3. Multiply out the squared bracket $(2x - 5)^2$ — write it twice and multiply. (worked 08:00-11:38).

Example 4. Multiply out $(2x - 7y)(3x + 4y)$ and group the like terms. (worked 13:07-14:35).

Example 5. Multiply out $(2x - 4)(3x^2 + 6x - 7)$. (worked 15:42-17:30).

Example 6. Multiply out the cubed bracket $(2x + 5)^3$ — three copies; multiply two first, then the third. (worked 17:30-21:06).

Questions

Practice. Multiply out $(4y - 6)^2$.

Posed at 14:35 in the tutorial.

Answers

Final answers only — pause the video and check yourself; the worked method is in the tutorial.

Example 1. $15x^2 + 18xy - 36x$

Example 2. $6x^3 - 21xy + 14x^2 - 49y$

Example 3. $4x^2 - 20x + 25$

Example 4. $6x^2 - 13xy - 28y^2$

Example 5. $6x^3 - 38x + 28$

Example 6. $8x^3 + 60x^2 + 150x + 125$

Practice. $16y^2 - 48y + 36$

Overlaps with these tutorials

LCOL Algebra 1 — Signs and **Algebra 2 — Grouping Like Terms**. The sign rules for each multiply, and the tidy-up step at the end. Do both first.

LCOL Algebra 8 — Factorising 1. Factorising is this lesson run in reverse — the built-in check is to multiply back out.