

LCOL Algebra 12 — Factorising 5

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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.

Questions

Part 1. Choose the method and factorise $9x^2 - 25y^2$.

Posed at 01:06 in the tutorial.

Part 2. Choose the method and factorise $9x^2 - 18xy$.

Posed at 02:06 in the tutorial.

Part 3. Choose the method and factorise $b - bc + 1 - c$.

Posed at 03:00 in the tutorial.

Part 4. Simplify $\frac{2x^2 - 5x - 12}{6x + 9}$ (factorise top and bottom, then cancel).

Posed at 04:09 in the tutorial.

Answers

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

Part 1. Difference of two squares $\rightarrow (3x - 5y)(3x + 5y)$

Part 2. Common factor $\rightarrow 9x(x - 2y)$

Part 3. Grouping $\rightarrow (1 - c)(b + 1)$

Part 4. $\frac{(2x + 3)(x - 4)}{3(2x + 3)} = \frac{x - 4}{3}$

Overlaps with these tutorials

LCOL Algebra 8-11. The four factorising types this lesson revises — the skill here is choosing which to use. Do them first.

LCOL Algebra 13 — Fractions 3. More factorise-and-cancel fraction work. Comes next.