Algebra 5 — Fractions Part 2

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ON THE LCHL PAST PAPERS · 2020 P1 Q7(b)(i) (main sitting, 7 marks) · 2019 P1 Q1(b) (main sitting, 12 marks)

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. $(x^2 + 7x + 10)/(5x + 10) \div (x^2 + 12x + 35)/(2x^2 + 19x + 35)$ *(worked 00:00–03:00)*.

Questions

Simplify each of the following

Q1.i. $\frac{x^2+8x+15}{5x+25} \div \frac{x^2+7x+12}{5}$

Posed at 03:24 in the tutorial.

Q1.ii. $\frac{21x^2+25x-4}{9x+12} \div \frac{49x^2-1}{14x+2}$

Posed at 03:24 in the tutorial.

Q1.iii. $\frac{2x+1}{4x^2+14x+6} \div \frac{2x^2+3x+1}{4x^2+6x+2}$

Posed at 03:24 in the tutorial.

Answers

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

Example 1. $(2x + 5)/5$

Q1.i. $\frac{1}{x+4}$

Q1.ii. $\frac{2}{3}$

Q1.iii. $\frac{1}{x+3}$

Overlaps with these tutorials

Algebra 4 — JC Fractions. Introduces the four fraction techniques this video drills. Do Algebra 4 first.

Algebra 1 — JC Factorising. Common factors ($5x + 25 = 5(x + 5)$) and the occasional DOTS are used silently in every cancellation.

Algebra 2 — Factorising Quadratics. Split-the-middle-term runs every numerator and denominator here.