

ALGEBRA II - TECHNIQUES

Study Plan

Section 2 Algebraic fractions and equations involving them

Background

This section revisits some of the work covered in the previous chapter and then extends it. If you are in any doubt about dealing with fractions, revise the topic using examples that contain numbers only first, using the notes on the website, and then go on to fractions that include algebra.



Read examples 2.6 and 2.7 and note that if a process does not work with numbers then it will not work with letters. When in doubt check using numbers as per the examples. Just remember that $\frac{\sin x}{n} \neq 6$!!!!

Example 2.8 revises basic arithmetic as well as algebra. You need to understand what is meant by a common denominator and the lowest common multiple. It is not wrong to have a denominator higher than the lowest common denominator, but it does mean more work at the end of the question because you will have to do some cancelling to get the answer into its simplest form. Most of the mistakes made at this level involve signs or incorrect manipulation of algebraic expressions, so you need to practise until the techniques become second nature to you.



Exercise 2C

Try all of the exercise, making sure that you can factorise when necessary. Pay particular attention to the signs in question 3.

Solving equations pulls together the work you have just completed with some of the work from chapter one.

Example 2.10 highlights a common mistake i.e. **NOT** multiplying **EVERY** term by the multiplier but multiplying only the fractional terms. Example 2.11 highlights the need to find the lowest common denominator and the factorising that may be needed to do this. Example 2.12 is a harder example, demonstrating how the techniques are used as well as incorporating the speed - distance - time formula that you learned in year 8 or 9.



Exercise 2D

Try the odd numbered parts of question 1 and then do questions 2, 3 and 5.