

Section 3: Further integration

Crucial points

- 1. Be careful when integrating negative and fractional powers**
Make sure that you add 1 to the index correctly, and remember that you must divide by the **new** index.
- 2. Remember that you cannot yet integrate x^n for $n = -1$**
The rule for integrating x^n is valid for all values of n except for $n = -1$. You will learn to integrate $\frac{1}{x}$ in A level Mathematics.
- 3. Look out for discontinuities when finding the area under a graph**
Remember that you cannot integrate across a discontinuity. See Example 5 in the Notes and Examples.