Questions: Introduction to integration

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Summary

A selection of questions for the study guide on introduction to integration.

\*Before attempting these questions, it is highly recommended that you read [Guide: Introduction to integration](../studyguides/introtointegration.qmd)

## Q1

Using the power rule and laws of indices (as appropriate), find the following indefinite integrals.

1.1.

1.2.

1.3.

1.5.

## Q2

Use the power rule to integrate the following expressions, applying the laws of indices where necessary.

2.1.

2.2.

2.3.

2.4.

2.5.

## Q3

The following expressions contain fractional indices of . Find these integrals.

3.1.

3.2.

3.3.

3.4.

3.5.

## Q5

Integrate the following functions with respect to .

5.1.

5.2.

5.3.

5.4.

5.5.

## Q1

Evaluate the following definite integrals with respect to .

1.1.

1.2.

1.4.

## Q2

By using an appropriate substitution, evaluate the following definite integrals with respect to .

2.1.

## Q3

Evaluate the following trigonometric definite integrals with respect to , using the graphs of and to help you.

3.1.

3.2.

3.6.

## Q4

Evaluate the following trigonometric definite integrals with respect to , using the graphs of and to help you.

4.1.

4.2.

[After attempting the questions above, please click this link to find the answers.](../answers/as-introtointegration.qmd)

## Version history and licensing

v1.0: initial version created 05/25 by Donald Campbell as part of a University of St Andrews VIP project.

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