Questions: Logarithms

Zoë Gemmell

A selection of questions for the study guide on logarithms.

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

## Q1

For the following, find the value of , representing your answer exactly (not decimals).

1.1.

1.2.

1.3.

1.4.

1.5.

1.6.

1.7.

1.8.

1.9.

1.10.

1.11.

1.12.

## Q2

Before attempting this question, write out the five laws of logarithms next to their names: the product rule, the quotient rule, the power rule, the zero rule, the identity rule.

Using the five laws of logarithms, find the value of :

2.1.

2.2.

2.3.

2.4.

2.5.

2.6.

## Q3

Using the change of base rule and other laws of logs if required, express the following logarithms as expressions involving a logarithm to the specified base. Give your answer as simply as possible, evaluating if you can.

3.1. to base

3.2. to base

3.3. to base

3.4. to base

3.5. to base

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

## Version history and licensing

v1.0: initial version created 08/23 by Zoë Gemmell as part of a University of St Andrews STEP project.

* v1.1: edited 05/24 by tdhc.

[This work is licensed under CC BY-NC-SA 4.0.](https://creativecommons.org/licenses/by-nc-sa/4.0/?ref=chooser-v1)