



QUESTION WORKBOOK

Logarithms and their laws

Exponentials and logarithms · Year 12

7 questions · 23 marks

PRINT EDITION

SECTION A · Warm-up

A1 Write down the values of $\log_2 32$, $\log_5 125$ and $\log_{10} 0.01$. [3]

A2 Write $\log 8 + \log 5 - \log 10$ as a single logarithm. [2]

SECTION B · Standard

B1 Write $\frac{1}{2} \log 49 + \log 2$ as a single logarithm. [3]

B2 Solve $e^{2x-1} = 12$, giving your answer to 4 significant figures. [3]

B3 Solve $\ln(2x + 5) = 3$, giving your answer to 4 significant figures. [3]

B4 Solve $5^{2x+1} = 40$, giving your answer to 4 significant figures. [4]

SECTION C · Stretch

C1 Solve $2^{2x} - 5 \times 2^x + 4 = 0$. [5]