



MATHEMATICS ADVANCED (YEAR 11 / PRELIMINARY, NSW) (YEAR 11) • PRACTICE ASSIGNMENT

Functions and Logarithms Practice

FUNCTIONS MEDIUM

Work through each question in order. Show your working in the space provided where it helps — there's no time limit, just do your best.

- 1

State the domain and range of $f(x) = \sqrt{x - 3}$.
- 2

Solve for x in $[0^\circ, 360^\circ]$: $\sin(x) = 0.5$.
- 3

Simplify: $\log_2(8) + \log_2(4)$.
- 4

Differentiate from first principles: $f(x) = x^2$.
- 5

A sample has mean 24 and standard deviation 3. Find the z-score for a value of 30.
- 6

Solve: $2^{(x+1)} = 16$.

TEACHER'S REMARKS

Score: _____ / 6