



Calculus and Sequences Practice

CALCULUS HARD

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

Find the general solution to $\sin(x) = \cos(x)$ for $0 \leq x \leq 2\pi$.
- 2

Evaluate the integral $\int(3x^2 - 4x + 1) \, dx$.
- 3

A geometric sequence has first term 5 and common ratio 2. Find the sum of the first 6 terms.
- 4

Find the equation of the normal to the curve $y = x^2$ at the point (2, 4).
- 5

X is normally distributed with mean 50 and standard deviation 8. Find $P(X > 58)$.

TEACHER'S REMARKS

Score: _____ / 5