IQM3004 A2 Teacher marking exercise

Mathematics Component 2 Paper 2 Sample 2026 v2 source bound synthetic practice pack

The selected synthetic extracts below form an unmarked exercise. Apply the supplied assessment criteria, record evidence and propose marks or bands before consulting the separate teacher reference.

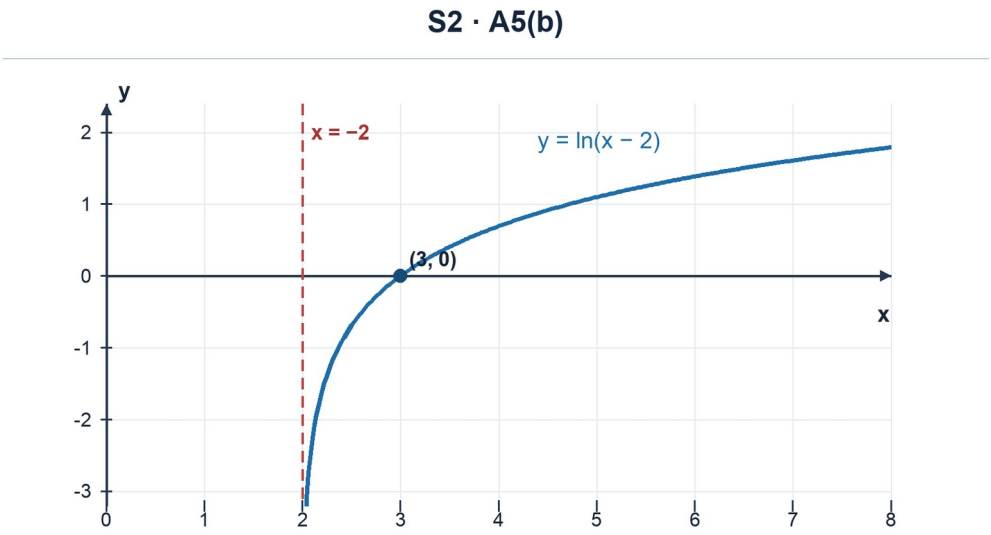
Source: current Sample 2026 IQM3004 A2 Paper 2 candidate question paper and v2 staff mark scheme. The assessment is a three-hour, 150-mark paper with nine compulsory Section A questions and six compulsory Section B questions. Candidate answer booklet and formula sheet were also consulted. Exact source filenames and SHA-256 values are retained in the source manifest.

Contains only selected unmarked synthetic extracts and response-specific diagrams.

Unmarked calibration extracts

Work independently from the current v2 scheme. Record marks and the specific response evidence before consulting the separate reference. These fictional extracts are for teacher calibration only.

EXTRACT A — S2, A5(b): “Increasing logarithmic curve for x>2; I label the vertical asymptote x=−2; x-intercept (3,0).”



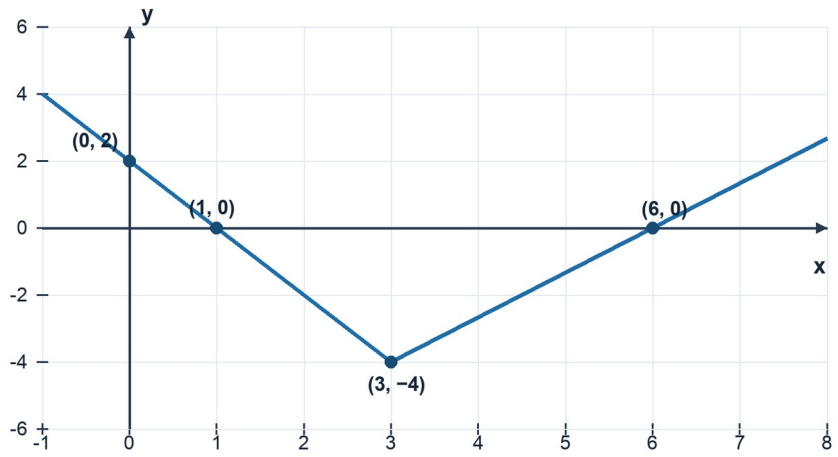
S2 response graph for y=ln(x−2).

Proposed marks: / 2. Evidence / feedback:

EXTRACT B — S2, A8(a): “Upward V with vertex (3,−4), left x-intercept (1,0), right x-intercept (6,0), and y-intercept (0,2).”

$2|x-3|-4=0,\ \ (3,-4),\ (1,0),\ (6,0),\ (0,2)$

S2 · A8(a)



y = 2|x − 3| − 4

S2 response graph for y=2|x−3|−4.

Proposed marks: / 3. Evidence / feedback:

EXTRACT C — S1, B1(b): “y′=[x(1/x)−lnx]/x²=(1−lnx)/x². For x>0 the denominator is positive; y′>0 iff lnx<1, so y increases on 0<x<e.”

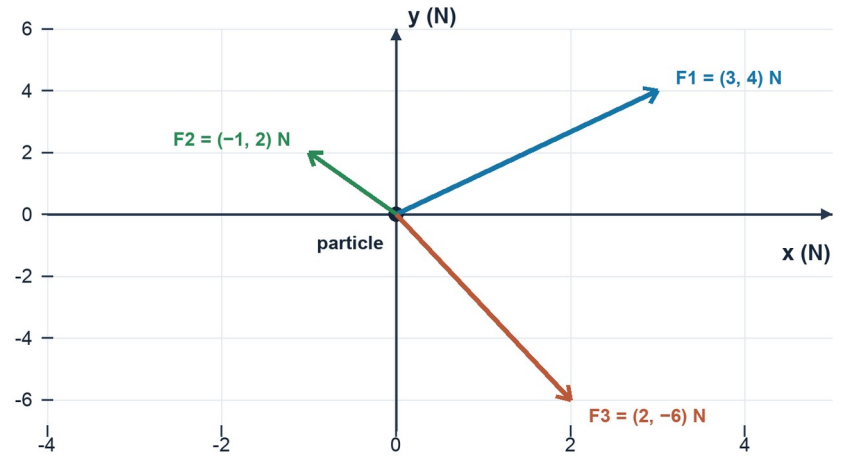
$$y' = \frac{x(1/x) - \ln x}{x^2} = \frac{1 - \ln x}{x^2}, \quad 0 < x < e$$

Proposed marks: / 4. Evidence / feedback:

EXTRACT D — S3, B4(c): “Resultant=(2,6) N; equilibrium force=(−2,−6) N. My drawing uses F3=(2,−6); equilibrium means it stays still.”

$(2,6),\ (-2,-6),\ \text{drawn}\ (2,-6)$

S3 · B4(c)



Three forces act at the same particle

S3 response force vectors acting at the particle.

Proposed marks: / 5. Evidence / feedback: