# IQM3004 A2 Teacher marking reference

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

This reference supports discussion of the selected exercise extracts. Marks and bands are proposed documentary judgements, subject to human subject review.

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 concise source-criterion decisions and feedback for each selected extract; the full proposed marking remains in the separate internal Proposedmarking document.

## Reference for selected extracts

Proposed marks are for discussion against the assessment-specific scheme; the response extracts remain synthetic.

| Extract | Award / max | Source criterion evidence and feedback |
|---|---|---|
| A — S2 A5(b) | 1 / 2 | Award the curve/intercept/domain point only where supported by the visible drawing and text; here the curve exists for x>2 and crosses (3,0). Do not award the vertical asymptote point: the response labels x=−2 instead of x=2. Feedback: retain the curve domain and correct the asymptote label. |
| B — S2 A8(a) | 1 / 3 | Award the upward V and vertex (3,−4). Withhold the x-intercepts point because the right intercept is (6,0), not (5,0); withhold the y-intercept/slopes point because the connected right arm then has slope +4/3 rather than +2. Feedback: solve 2\|x−3\|−4=0 on both sides to obtain x=1,5, and keep both arms at gradient magnitude 2. |
| C — S1 B1(b) | 4 / 4 | $y' = \frac{x(1/x) - \ln x}{x^2} = \frac{1 - \ln x}{x^2}, \quad 0 < x < e$<br>Award M1 for the quotient-rule numerator, A1 for the simplified derivative, M1 for using the positive denominator and solving 1−ln x>0, and A1 for the increasing interval 0<x<e. Feedback: the domain x>0 is retained throughout. |
| D — S3 B4(c) | 3 / 5 | Award M1 for adding components and A1 for resultant (2,6); award A1 for written balancing force (−2,−6). Withhold both diagram and equilibrium-motion points: drawn F3=(2,−6) is incorrect and “stays still” is too narrow; zero resultant implies constant velocity, including rest. Feedback: draw three concurrent vectors summing to zero and explain constant velocity. |