IQM3003 A2 Teacher marking reference

Mathematics and Data Handling Component 2 Data handling presentation Riverside College travel improvement

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

Source assessment: IQM3003 Component 2 Data handling presentation, Sample 2026, current v2 candidate task brief and marking criteria. Marking authority: IQM3003_A2_2026-S_Staff Marking Framework.pdf, with the supplied Staff Analytical Guide. The unchanged supplied Dataset.xlsx contains 48 constructed journeys. Exact source identities and SHA256 checks are held in the internal pack record.

These fictional extracts support staff marking practice. No live delivery, learner authorship or individual competence has been observed. Hypothetical bands apply only to the words shown; numerical oral marks and final totals are withheld.

Reference for extract A

The candidate correctly distinguishes two missing lateness values from recorded zeroes and states the correct denominator. This supports AO1 terminology and AO2 accuracy. The proposed stratified random sample by campus/schedule, proportional selection and non-response tracking is contextually appropriate and recognises residual week effects, supporting AO3. To probe depth, ask the candidate to explain the sampling frame and whether proportional sample numbers match enrolment; ask what non-response analysis they would retain. The answer does not establish that their sampling design would remove all bias.

Reference for extract B

The first sentence partially identifies the regression slope and units, which is limited AO1 evidence. The second generalises the pooled fitted line without qualification; it does not distinguish association from causation, test mode structure or consider model limits, so AO2 evidence is weak. The recommendation jumps from bus journey duration to lateness and policy effect, neither of which the regression establishes; this is weak AO3 contextual evaluation. Feed forward: name both variables, say “in this pooled sample”, note that mode may confound the relationship, and explain that a measured pilot/repeated comparison is needed before claiming a bus change will reduce lateness.

Reference for extract C

The answer identifies the actual variables and restricts the statistic to the supplied pooled sample. This is accurate AO1 terminology. AO2 is supported by the rejection of an invalid inference and recognition of mode as a possible confounder. AO3 is supported by connecting the sampling and context limitations to repeated or matched observations and a trial. This extract offers A-band indicators for reasoning and contextual evaluation, but its few sentences cannot establish whole-assessment performance or any actual individual mark. A suitable follow-up would ask for one within-mode result and how it changes interpretation of the pooled line.

Suggested live follow up questions not leading prompts

Ask a candidate to reproduce one quartile or density calculation from the submitted analysis. Ask what retaining J13 does to a selected summary and why deleting a valid record is not automatic. Ask what the pooled regression predicts at a stated distance and why that prediction should not be extrapolated or read causally. Ask how to sample non-volunteers, what would make the recommendation change, and which part of the group analysis the candidate can independently explain. Record exact wording, individual response, marker observations and any follow-up. Do not credit this scripted reference in place of live evidence.