Example 18: Graphing the Pharmacokinetic Profile

Assessment

Criterion	A	B	C	D	E (SL)	E (HL)	Total (SL)	Total (HL)
Achievement level awarded	4	2	4	3	5	3	18	16
Maximum possible achievement level	4	3	4	3	6	6	20	20

Student work (PDF)

Annotated student work (PDF)

Comments

Comments

Criterion A: Communication

A4—Has all required elements. Rationale and implied aim and reaches conclusion Clearly written with helpful explanations and diagrams. Avoids repetition of calculations to keep piece concise.

Criterion B: Mathematical presentation

B2—Most graphs are clearly labelled (but not all). Defines key terms, units and variables throughout. Error on p11 and p13.

Criterion C: Personal engagement

C4—Engaged with the Mathematics in a topic obviously relevant to herself and uses real-life data. Explores unfamiliar maths and devises own approach to area under curve. Comparison of methods (geometric v calculus). Considers modelling.

Criterion D: Reflection

D3—Considers other concentration time graphs. Compares results and reflects on this. Considers suitability and accuracy of chosen modelling functions as they develop and when they produce results. Returns to original problem to discuss results in context.

SL Criterion E: Use of mathematics

E5—Integration steps are clearly understood. Demonstrates understanding of concepts throughout. Understands concept of modelling.

HL Criterion E: Use of mathematics

E3—Limited data used. Integration steps are clearly understood. Demonstrates understanding of concepts throughout. Understands concept of modelling. Minor error

on p12.

Any Other relevant information

Had not covered area under a curve via either trapezium rule or integration.