Example 15: Chinese remainder theorem

Subject: Mathematics: analysis and approaches and mathematics: applications and interpretation
Paper component: Internal assessment, standard level (SL) and (HL)

Assessment

Criterion	A	B	C	D	E (SL)	E (HL)	Total (SL)	Total (HL)
Achievement level awarded	3	3	1	1	4	3	12	11
Maximum possible achievement level	4	4	3	3	6	6	20	20

Comments

Criterion	Comments
A Presentation	The exploration was well explained and very coherent until the candidate attempted to explain the use of the CRT in encryption.
B Mathematical communication	Most mathematical communication is correct until page 6 is reached and candidate does not explain what the numbers x_1, x_2, etc, represent.
C Personal engagement	The candidate demonstrates some personal engagement by trying to understand new mathematics. Although this is appreciated, the student voice cannot be heard in the exploration.
D Reflection	The reflection is very limited and rather superficial towards the end of the exploration.
E Use of mathematics SL	The mathematics explored is beyond the syllabus and the candidate understands the basics of modular arithmetic and how to apply the algorithm.
E Use of mathematics HL	The mathematics explored is beyond the syllabus and the candidate understands the basics of modular arithmetic but not the CRT. They show knowledge of applying the algorithm by substituting the correct numbers.
General comments	