

## Examlet 4 Example Rubrics

Table 1: Unrolling problem, substitution only (6 points)

Criteria	Mastered (2)	Proficient (1)	Novice (0)	
Simplifying	fully simplified	some simplification missing	not simplified at all	
Criteria	Mastered (4)	Proficient (3)	Novice (1)	Absent (0)
Two substitutions	both substitutions done properly	small algebraic error	extra work term left as n, or didn't show any work	extra work term left as n and didn't show any work

Table 2: Unrolling problem, final stages (6 points)

Criteria	Mastered (2)	Proficient (1)	Novice (0)
Finding value of k at base case	value of k found	found value at k at incorrect base case	completely incorrect or missing
Subbing value of k and base case	both substitutions done properly	base case substitution incorrect	completely incorrect or missing
Simplifying	fully simplified	missing some simplification	not simplified at all

Table 3: Induction (15 points)

Criteria	Mastered (2)	Proficient (1)	Absent (0)	
Base case(s)	checks correct values and shows some work	either checks incorrect values or does not show work	neither checks correct values nor shows work; or missing	
Inductive hypothesis	bounds (strong IH) and claim correct, explicitly stated	incorrect bounds or claim (weak IH)	missing or incorrect bounds and claim	
Style and clarity	excellent style, good connector words and formatting	poor formatting or use of words	very difficult to follow	
Criteria	Mastered (3)	Proficient (2)	Novice (1)	Absent (0)
Goal and division of problem	larger problem split correctly into smaller problem(s) and goal matches IH	goal off by one, but split correctly	small issue with split	large issue with split (including missing)
Applying IH	IH applied where necessary with correct values plugged in	IH applied but small issue with values, or doesn't call out IH	missing some case where IH must be applied	IH never applied
Details	algebra or other details correct; conclusion is reached	small issue with details, or stops one step before conclusion	large issue with details	large issue with details and conclusion never reached

*Note:* Any major issues with dividing the problem will typically also result in errors and points off in other sections (applying IH and details).