

NAME:

**Weighting/
Applicability**

0-Absent

**1-Somewhat
On Track**

2 - On Track

3 - Proficient

4 - Exemplary

Problem Definition	SYSTEM DESCRIPTION (representation, notation, and annotation)		missing system diagram	missing components of system diagram	all components identified in system diagram	all components identified and linked in system diagram	insightful system diagram
	ASSUMPTIONS		none or incorrect	implicit and incomplete	(implicit and complete) or (explicit and incomplete)	explicit and complete	explicit, complete, justified
	KNOWN & UNKNOWN		not identified	incompletely identified	completely identified and cryptically labeled	completely identified and mostly labeled	completely identified and labeled
	GOVERNING EQUATIONS		missing	partial set	complete set, inconvenient form for solution	complete set, convenient form for solution	annotated, complete set
Solution	SOLUTION METHOD (line of reasoning, use of tools)		missing	poorly ordered	logical with minor flaws	logical and correct	optimal
	ANSWER (boxed, correct, units, sig figures)		missing all attributes	boxed	boxed and units	boxed, units, and correct	boxed, units, correct, and significant figures
	VALIDATION (unit consistency, order of magnitude, independent verification)		no effort to validate	incorrect unit check	units checked	units checked, magnitude checked	units checked magnitude checked, checked against alternative solution
Professionalism	TECHNICAL COMMUNICATION (legibility, layout, formatted tables, graph labels, etc.)		missing component(s)	not organized	organized for reuse by the author	organized for reuse by a third party	suitable for professional dissemination
	REFLECTION (transferability of solution, lessons learned about process, audience)		no effort	not relevant	no insights	insightful (in a narrow context)	thoughtful (able to transfer to new context)