

Student Guide to Rating Physics 102 Homework Problems

- 1) Identifies and summarizes the problem/question.

Weak

Strong

Does not identify the issue, is confused about the issue, or represents the issue inaccurately or incompletely.

Identifies not only the basics of the issue, but recognizes nuances of the issue.

- 2) Identifies the law(s) of physics that are applicable to the problem.

Weak

Strong

Does not identify the law(s) of physics applicable to the problem.

Identifies applicable law(s), and clarifies distinctions at many levels.

- 3) Demonstrates how the law(s) of physics apply to the problem.

Weak

Strong

Fails to describe how the relevant law(s) are at work in the problem. Does not attempt to apply the law(s) to the specific circumstance by creating a specific representation of the more general law.

Clearly articulates how the general law can be applied to the specifics of the problem. Sees multiple ways of approaching the problem.

- 4) Identifies and applies other supporting definitions or relationships.

Weak

Strong

Fails to identify or apply any supporting definitions or relationships which would allow the student to completely apply the laws.

Identifies and applies all supporting definitions and relationships to the problem solution.

- 5) Uses information above to get a physically consistent solution.

Weak

Strong

Merely repeats information previously provided, taking it as absolute truth, or denies the information provided. Restates the laws rather than providing specific applications. Does not engage the supporting data or evidence critically in any way.

Examines the information provided previously, questioning its applicability and completeness. Considers differences between theory (general) and application (specific) and evaluates the information sources.