

## Physics 105, Grading Information

Test, quiz and “special” homework problems will usually be graded out of 10 pts. The following is a guideline to what’s expected:

### 10: EXCELLENT = Complete and correct.

- all diagrams and labels, symbols given to unknowns
- equations given (before inserting the problem’s numbers)
- all the necessary mathematical work to reach the answer
- explicit unit conversion and the correct significant figures

### 9: 1 minor problem: examples:

- the mathematical steps are not quite properly executed or detailed
- an incorrect equation / concept is used, but it is *very* closely related to the correct equation / concept
- a *very minor* part of a multi-part problem is ignored / poorly addressed

### 8: GOOD = More than a satisfactory start: 2 minor problems (see above) or 1 significant problem: examples:

- equation / concept setup is fairly close to correct and the work follows through properly from that premise
- a correct or *very nearly* correct setup and a good start for the mathematical steps, but the math is significantly incorrect or incomplete
- part of a problem with at least 3 parts is ignored or poorly addressed
- lack of mathematical development reaches “magic happens” level.

### In addition, at 8 pts and above, 1/2 pt each (to a maximum of 1 pt) will be deducted for each of the following:

- math “typo” (correct numbers inserted near the final step, but incorrect result)
- no numerical insertion shown in most formulae
- wrong sig figs
- wrong units or no unit conversion shown when it’s important (e.g., hours given, seconds needed)

### 7: SATISFACTORY start, e.g.:

- a significant physical concept is misused or misunderstood, but the concept used is related to elements of the problem AND there is significant mathematical development
- one part of a problem is correct but a significant part of the problem (e.g., 1 of 2 things) is poorly addressed

**6: Less than satisfactory, but more than minimal work** (see below). Most likely given when the response indicates that information was extracted, some equation related to the information is identified and there is some start to the mathematical work.

### 5: PASS/FAIL Boundary = Minimal start:

I give a “highest failing grade” for reasonable attempts to show some basic understanding of a problem.

This requires extracting information from the problem AND writing down some equation related to the information. **The clearest demonstration that you are extracting information is to list the physical information with appropriate symbols AND to put that information on a diagram.**

Fewer than 5 pts may be earned for less than the minimal start. I typically give 2-4 pts for cases such as: *information but no correct equation, partial information extracted from the problem, a correct equation (or a series of correct and incorrect equations) with no information extraction, etc.*