Directions for Problem Assignments
Physics 123
Independent Study
Brigham Young University

Problem assignments are computer graded. You submit your answers over the internet.

Most problems contain blanks where you must enter data. As an example, look at the Problem Assignment for Lesson 1. In Problem 1.1, there is a blank labeled [01]. In Problem 1.2, there is a blank labeled [02]. There are no blanks in Problems 1.3 and 1.4. In Problem 1.5, there is a blank labeled [03], and so on. The last blank is found in Problem 1.11 and is labeled [09]. Every student receives a different set of numbers to go into those blanks. Thus, every student will obtain different answers for those problems. You can obtain your set of numbers over the internet. Go to the lesson page on the internet (the page for Lesson 1 in this case) and click on the link, “Problems data and status,” near the top of the page. You will see a line like the following:


If these were your data, you would write the number 2.13 into the blank labeled [01], the number 8.3 into the blank labeled [02], etc. Of course, you must go to the internet to obtain your data.

On the lesson page, there is a link to each problem. You will work the problems one at a time and submit your answers to each problem one at a time. For example, click on the link to problem 1.1. You will see a box for entering the answer to that problem. The units are shown to the right of each box. Be sure that your answer is in the units requested. The required units are indicated both in the statement of the problem and on the internet page where you submit the answers. For example, Problem 1.1 asks, “what is the weight (N).” The “N” in parentheses means that you should give the answer in newtons.

Some numbers are so large or so small, that it is more convenient to write them in scientific notation. In order for the computer to be able to interpret your number, indicate the exponent of 10 with an “e”. For example, 3.00 \times 10^8 would be entered as 3.00e8, and 1.6 \times 10^{-19} would be entered as 1.6e-19. Do not put any spaces or commas in the number.

Unless otherwise requested in the problem, give all numerical answers to 3 significant figures. Remember that leading zeros do not count as significant figures. For example, the number, 0.0024, has only 2 significant figures.

When you submit your answers, the computer will immediately respond with a report, showing for each answer whether or not it is correct. It your answer is not correct, you will see what the correct answer should have been. Problems with numerical answers are worth 5 points each. You do not receive any points unless the answers for every part of the problem are correct. For example, there are two answers required for Problem 1.6, parts (a) and (b). Both parts must be correct to receive any points.
If you answer a problem incorrectly, you get another try to answer it for 4 points. However, since we told you what the correct answer should have been, we give you different data for the second try so that the answer will be different. This new data will appear at the bottom of the report. You can also see this information, along with all previous reports, on the “Problems data and status” page where you originally obtained your data.

If you answer the problem incorrectly on the second try, you get a third try for 3 points, then a fourth try for 2 points, and finally a fifth try for 1 point. For each try, we give you different data.

After the second try, you will receive a hint on how to do the problem. If this hint begins with “Hint 1 of 2”, then you will receive an additional hint after the third try as well. If the hint begins with “Hint 1 of 1,” then this is the only hint you will receive. If you answer the problem correctly before you receive the hints, you will automatically receive all hints you would have received for the problem. This may be helpful if you really didn’t understand why your calculation produced the correct answer.

There are some “challenge problems.” These problems are for extra credit. They are usually more complex than the other problems. You will not receive any hints for these problems. Note that the total score for a lesson may not exceed 100%. The extra points earned by doing the challenge problem will increase your score, but not beyond 100%.

Some problems are associated with lab exercises which are described in more detail separately below the set of problems for each lesson. You will view a video of the lab exercise and obtain data from the video itself. You will then calculate the results for the lab and enter those results as answers to the problem. You will have five tries and receive hints, as with the regular problems. However, since the correct answers are the same for every try, the report will only tell you if your answer is incorrect and will not tell you what the correct answer should have been.

A few problems in Lesson 10 (like Problem 10.9) do not have any data to change. The answer will be the same for every try. Therefore, if you enter an incorrect answer for these problems, you will not be told what the correct answer should have been, only that your answer is incorrect.

Some problems are multiple choice. They are worth 2 points, and you only get one try. For example, Problem 5.9 through 5.20 are multiple choice. On the problem submission page on the internet, you will answer each of these problems using a drop-down list. To answer the problem, you select one of the choices in the list.

A few problems in Lesson 10 (like Problem 10.5) require you to enter a symbol for a nuclide. These are worth 2 points, and you only get one try.

Help on problem assignments: We will not give you help on solving any problem until you have tried enough times to see all of the hints for that problem. If you still cannot do the problem after you have considered the hints, you should write out your work as neatly as possible and send us a scanned copy. Give us as much information as possible about what you have tried doing on the problem. Even if your calculation resulted in an incorrect answer, write what you tried doing. In order to help you, we need to see what
your tried. Often, students have actually worked the problem correctly except for some minor calculator or units conversion error. It is much easier for us to help you find what you have done incorrectly if you show us all the details of what you have done, including the actual numbers you used in the calculations.

We will not give you help on solving the extra-credit challenge problems. You must solve these problems completely on your own.