

Feedback for MATH-UA 252/MA-UY 3204 - Fall 2022
Homework 0 & Homework 1

Sept. 24 By Your Grader

Rubrics for Homework 0:

(1) For all those who found a buddy and submitted the evidence of their connections with their buddy, full grades would be given.

(2) However, there would be no grades for those who did not submit anything.

Rubrics for Homework 1:

Notice: 10 points will be separated into 9 parts, each representing a small question in the Problem 1 and Problem 2. Wrong calculation or missing the requirement of the question will lead to a deduction of 0.5 point.

Problem 1(a): 1 point.

Problem 1(b): 1 point.

Problem 1(c): 1 point.

Problem 1(d): 2 points.

Problem 2(a): 1 point.

Problem 2(b): 1 point.

Problem 2(c): 1 point.

Problem 2(d): 1 point.

Problem 2(e): 1 point.

Baseline for Homework 1 and the future Homework:

(1) Do not worry if you cannot work out the problem because you will get some scores instead of nothing as long as you are on the track. Feel free to write down what you think! However, if you do not submit your homework, then there is nothing to say that 0 will be the only thing you get. Attitude matters most!

(2) Always remember to submit the '.ipynb' file or '.py' file or your github link if there are coding tasks in the homework because it will help me run your codes quickly. Most of the students did that for Homework1 but several did not. This time I gave a deduction of 1 point to those and next time the deduction will be more than that!

Common Problems in Homework1:

(1) Some students forgot to mention the dimension of the domain in Problem 1(a).

(2) Some students made mistakes when calculating the summation of matrix multiplication in Problem 1(b).

(3) As for Problem 2(d) and Problem 2(e), many students had really great observation. But there are some key points many students have not found yet:

You should notice that the trajectories begin to approximate the integral curves of a gradient flow for the given function. But it's OK if you do not know it. Comments which are somehow related to this are good, such as the overall shape of the trajectories.

Meanwhile, it is good if you could notice that depending on whether the first iteration is, the trajectory may not move very far. For instance, near the origin, they make very little progress because the gradient is quite small.