PROBLEM 3

- Train-test split: Use an 80-20 train test split for your network.
- If you use all possible combinations of x_i, x_i, you will get 441 samples as the problem states.
- The constraint is:

$$x = (x_i, x_j)\ where - 2 \leq x_i, x_j \leq 2$$

OUTPUT REQUIRED:

1. A report that shows your choice of various parameters, the output you got for each parts of the question, as well as the comments associated with each part of the question. Make sure that the separate questions are clearly labelled in your solution.
2. A Jupyter Notebook (*.ipynb*) file with all the parts of the problem (this can also be used as your report if you're comfortable with Markdown), showing various outputs including different graphs to show how training progresses in your network.
3. Report your training and testing accuracy for all runs.

PROBLEM 4

OUTPUT REQUIRED:

1. A report that shows the change of output (visual) with different values of σ_0 at the epochs mentioned in the problem statement.
2. A *.ipynb* file with the code that runs directly (no extra lines of code needed from our side) for SOM. Keep your recent output for our consideration and make it clear how we can change σ_0 to replicate your output.

NOTES:

- Only 1 *.ipynb* is allowed for Q3 and only 1 *.ipynb* file is allowed for Q4. Combine all your functions in one file for each of the questions.
- Make sure that your codes run without any errors and that it trains/tests the RBFN or SOM directly. No effort will be made to correct any errors in your code during testing on our side.