**Problem 5 (MATLAB Solution)**

1. **Working Code**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

1. **Execution of Program**

B.1. Run the program. The program initially asks for a function for x(n)

A screenshot of a computer

Description automatically generated

B.2 Input the function for x(n), which is x(n) = sin(3\*pi\*n/100)

A screenshot of a computer

Description automatically generated

B.3 The graph of the function for x(n) and y(n) is shown in one plot window with labels and legends

A screenshot of a computer

Description automatically generated

B.4 A larger view of the plot

A close up of a person

Description automatically generated