Digital Signal Processing Lab Assignment 1

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Question 1:

Code:

```
mean1 = mean(A2Q1);
variance1 = var(A2Q1);
power1 = 0;
disp(mean1);
disp(variance1);
disp(power1);
```

Result:

0.3196

0.1497

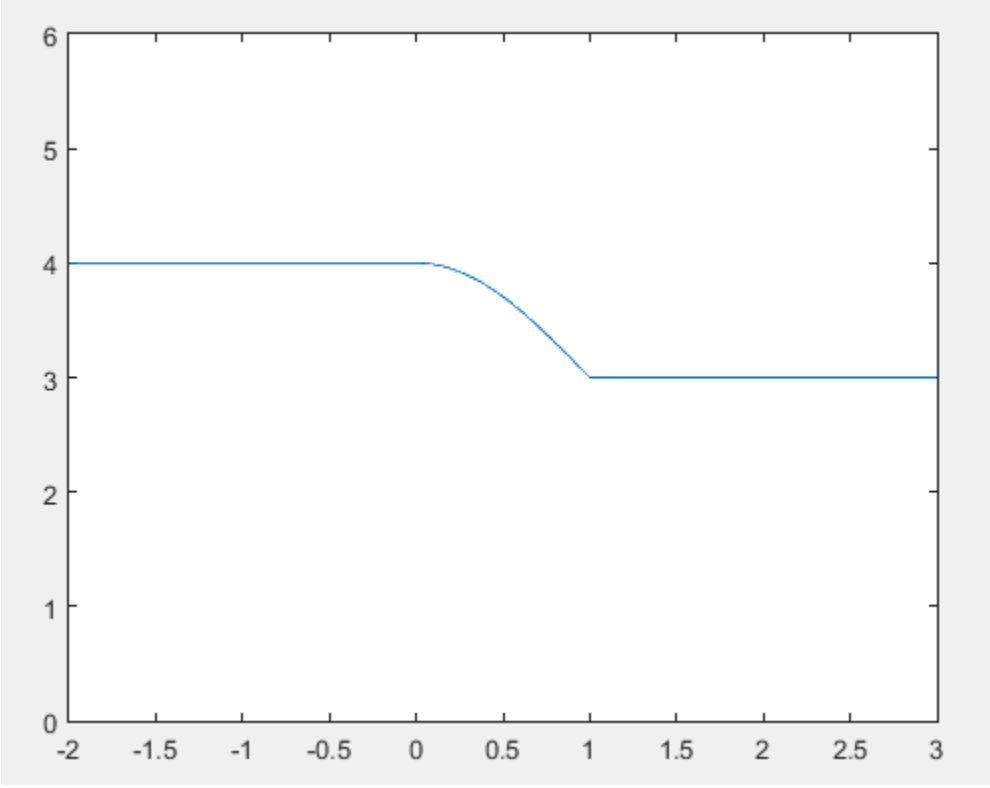
0

Question 2:

Code:

```
x1 = 4*ones(1, 200);
f2 = 0.25;
t2 = linspace(0, 1, 100);
phase = 90;
phase_in_rad = deg2rad(phase);
x2 = sin((2*pi*f2*t2)+phase_in_rad)+3;
x3 = 3*ones(1, 200);
x = [x1 x2 x3];
t = linspace(-2, 3, 500);
plot(t, x);
ylim([0 6]);
```

Result:

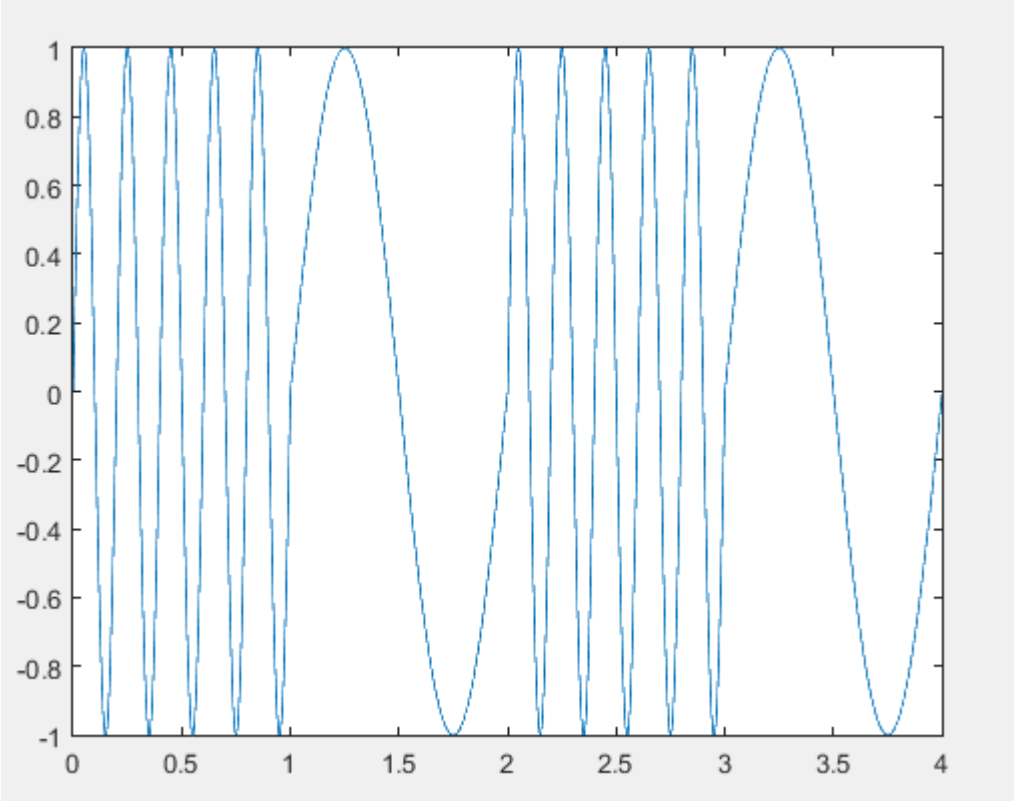


Question 3:

Code:

```
y1 = A2Q3_1(1:1000);
y2 = A2Q3_2(1001:2000);
y3 = A2Q3_1(2001:3000);
y4 = A2Q3_2(3001:4000);
y = [y1 y2 y3 y4];
t_tot = linspace(0, 4, 4000);
plot(t_tot, y);
```

Result:



Question 5:

Code:

```
hist(A2Q5, 100);
mean1 = mean(A2Q5);
standardDeviation1 = std(A2Q5);
disp(mean1);
disp(standardDeviation1);
```

Result:

4.9062 and 3.1041 are the mean and standard deviation