Table of Contents

Question 1: Time values between 0 and 6

```
t = (0:0.01:6);
```

Time values between 0 and 10 (for graphs)

```
t = (0:0.01:10);
```

Question 2: y1 sin function, y2 cos function

```
y1 = sin(2*t);
y2 = cos(5*t);
```

Setting up the figure for plotting 3 graphs

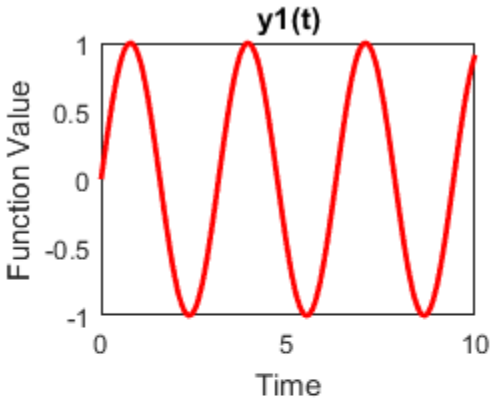
y1(t), y2(t), and Lissajous curve

```
figure
```

Subplot 1 for y1(t)

```
subplot(2,2,1) %% subplot row 1, column 1
p1 = plot(t,y1) %% plot1 ploting y1 vs. time
p1.LineWidth = 2; %% setting linewidth to 2
p1.Color = 'red'; %% setting colour to red
title('y1(t)'); %% setting title
xlabel('Time'); %% setting label of x-axis
ylabel('Function Value'); %% setting label of y-axis
```

```
p1 =

  Line with properties:

              Color: [0 0.4470 0.7410]
          LineStyle: '-'
          LineWidth: 0.5000
             Marker: 'none'
         MarkerSize: 6
    MarkerFaceColor: 'none'
              XData: [1x1001 double]
              YData: [1x1001 double]
              ZData: [1x0 double]

  Use GET to show all properties
```

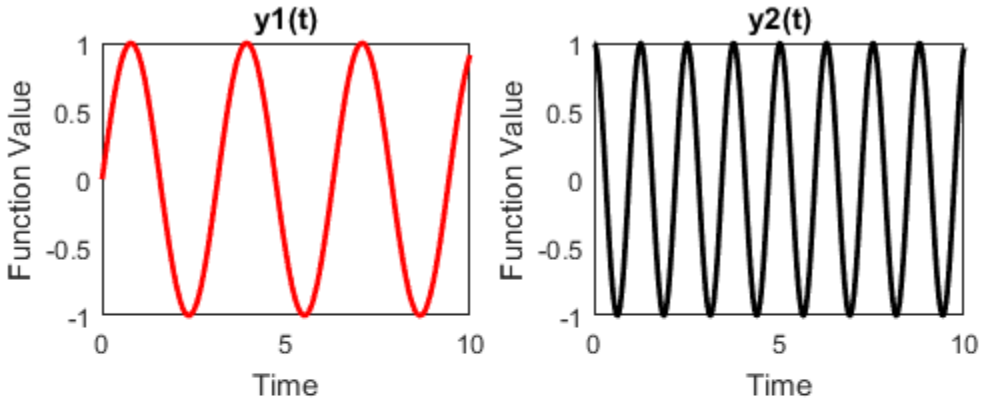


Subplot 2 for y2(t) following same conventions of plot 1

```
subplot(2,2,2) %% subplot row 1, column 2
p2 = plot(t,y2)
p2.LineWidth = 2;
p2.Color = 'black';
title('y2(t)');
xlabel('Time');
ylabel('Function Value');
```

```
p2 =

  Line with properties:

            Color: [0 0.4470 0.7410]
        LineStyle: '-'
        LineWidth: 0.5000
           Marker: 'none'
       MarkerSize: 6
  MarkerFaceColor: 'none'
            XData: [1x1001 double]
```

```
    YData: [1x1001 double]
    ZData: [1x0 double]

Use GET to show all properties
```

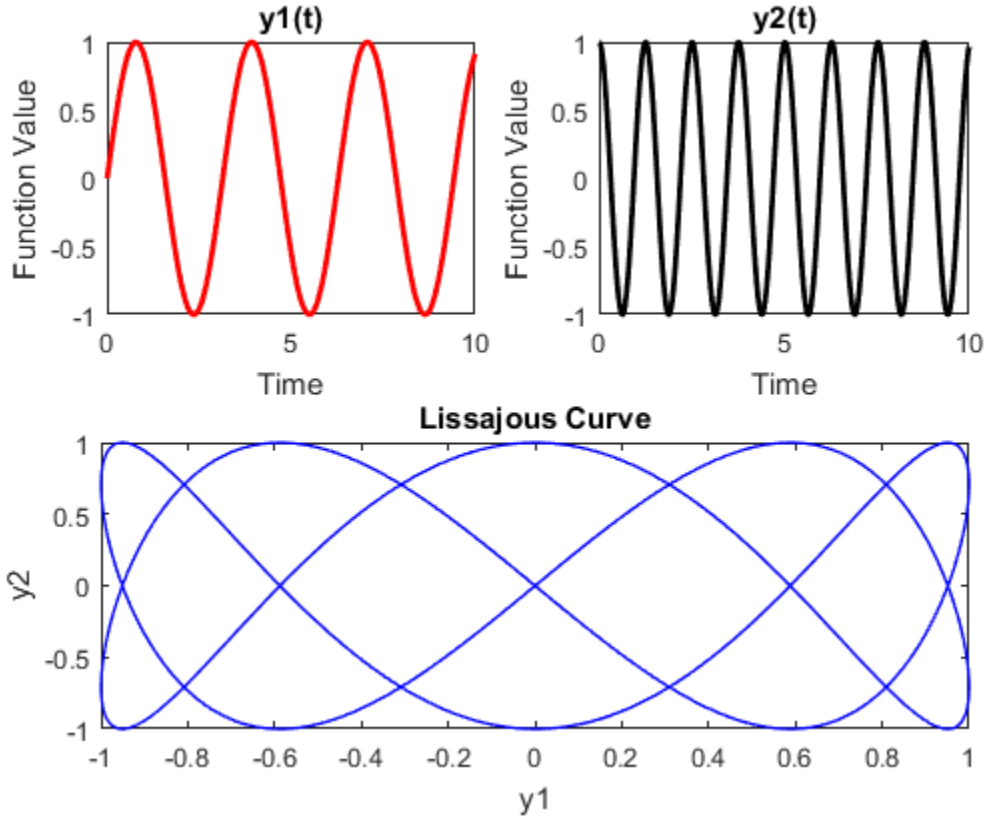


Question 4: Subplot 3 for y2 vs y1 as seen in the example provided

Follows same conventions of plot 1

```
subplot(2,1,2) %% subplot row 2, column 1 & 2
p3 = plot(y1,y2) %% setting x-axis to y1 and y-axis to y2
p3.LineWidth = 1;
p3.Color = 'blue';
title('Lissajous Curve');
xlabel('y1');
ylabel('y2');


p3 =

  Line with properties:
```

```
            Color: [0 0.4470 0.7410]
        LineStyle: '-'
        LineWidth: 0.5000
           Marker: 'none'
       MarkerSize: 6
  MarkerFaceColor: 'none'
            XData: [1x1001 double]
            YData: [1x1001 double]
            ZData: [1x0 double]

  Use GET to show all properties
```



Question 5: Subplot 4 for y2 vs y1 as seen in the example

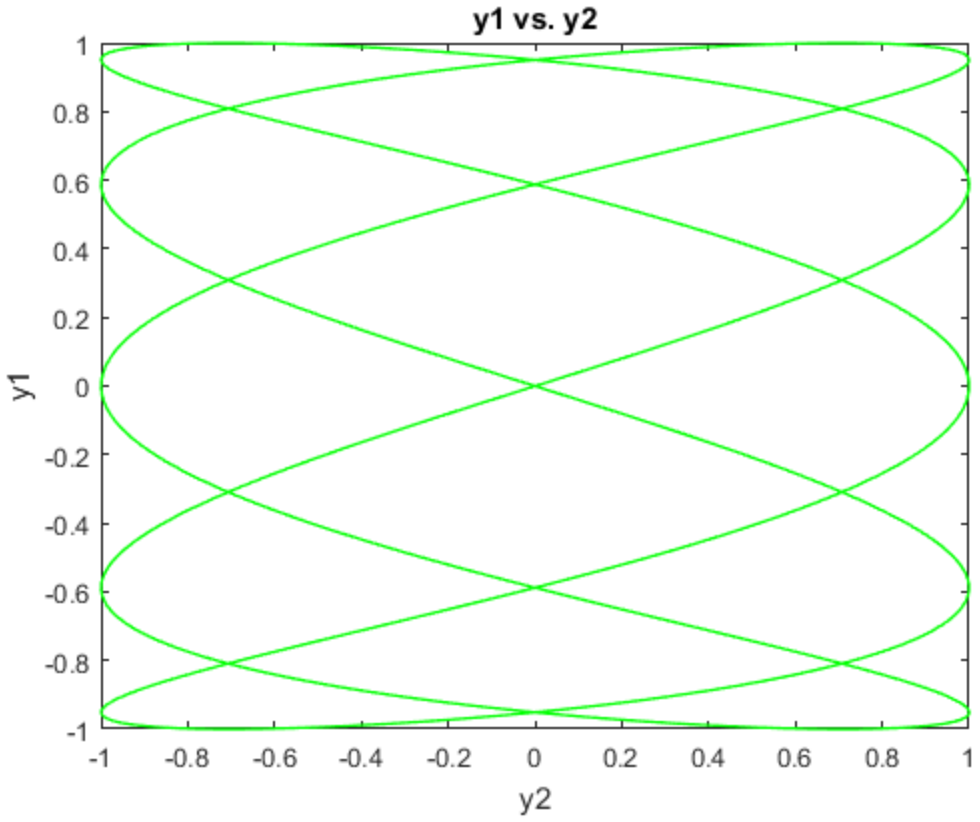
Follows same conventions of plot 1

The graph is rotated 90 degrees

```
figure %%Creating new figure to plot y1 vs. y2
p4 = plot(y2,y1)
p4.LineWidth = 1;
```

```
p4.Color = 'green';
title('y1 vs. y2');
xlabel('y2');
ylabel('y1');

y1 = sin(2 * 2*t); %% Multiplying arguments in sine function by 2
y2 = cos(2 * 5*t); %% Multiplying arguments in cosine function by 2
```

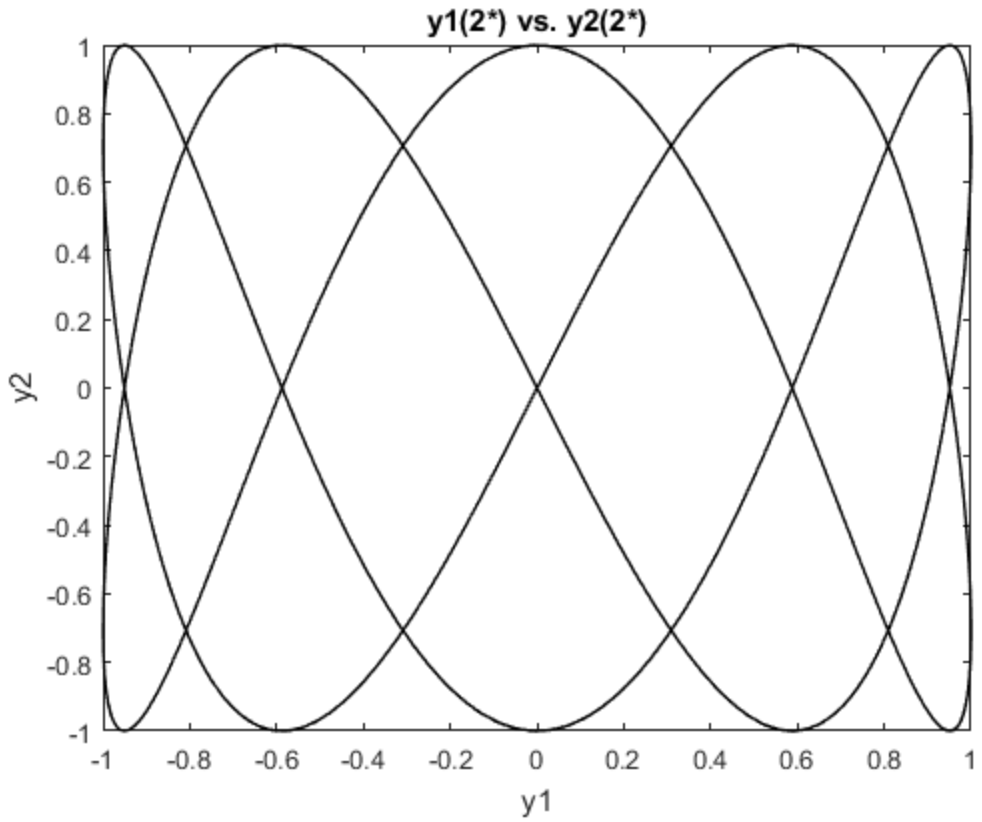
```
p4 =

  Line with properties:

              Color: [0 0.4470 0.7410]
          LineStyle: '-'
          LineWidth: 0.5000
             Marker: 'none'
         MarkerSize: 6
    MarkerFaceColor: 'none'
              XData: [1x1001 double]
              YData: [1x1001 double]
              ZData: [1x0 double]

  Use GET to show all properties
```



if both arguements are doubled, nothing changes 2/2 = 1

```
figure %%Creating new figure to plot when arguements are doubled
p5 = plot(y1,y2)
p5.LineWidth = 1;
p5.Color = 'black';
title('y1(2*) vs. y2(2*)');
xlabel('y1');
ylabel('y2');
```

```
p5 =

  Line with properties:

              Color: [0 0.4470 0.7410]
          LineStyle: '-'
          LineWidth: 0.5000
             Marker: 'none'
         MarkerSize: 6
    MarkerFaceColor: 'none'
              XData: [1x1001 double]
              YData: [1x1001 double]
              ZData: [1x0 double]

  Use GET to show all properties
```



Published with MATLAB® R2016a