Answer For Hw1

Problem 1 Solution

Question a

```
Please input celcius temperature: 20
The Fahrenheit temperature is: 68.00

Please input celcius temperature: 100
The Fahrenheit temperature is: 212.00

Please input celcius temperature: -40
The Fahrenheit temperature is: -40.00

Please input celcius temperature: 37
The Fahrenheit temperature is: 98.60
```

Question b

```
Celsius   Fahrenheit
20.00     68.00
21.00     69.80
22.00     71.60
23.00     73.40
24.00     75.20
25.00     77.00
26.00     78.80
27.00     80.60
28.00     82.40
29.00     84.20
30.00     86.00
```

Problem 2 Solution

```
Degrees       Sines       Cosines
        0           0        1.0000
  30.0000      0.5000       0.8660
  60.0000      0.8660       0.5000
  90.0000      1.0000            0
 120.0000      0.8660      -0.5000
 150.0000      0.5000      -0.8660
 180.0000           0      -1.0000
 210.0000     -0.5000      -0.8660
 240.0000     -0.8660      -0.5000
 270.0000     -1.0000            0
 300.0000     -0.8660       0.5000
 330.0000     -0.5000       0.8660
 360.0000           0        1.0000
```

Problem 3 Solution

- lines intersecting

```
Enter values for a, b, c, d, e, f :[1,1,3,2,-1,3]
x = 2.00,y = 1.00
```

- Coincident

```
Enter values for a, b, c, d, e, f :[1,1,1,2,2,2]
Coincident
```

- Parallel

```
Enter values for a, b, c, d, e, f :[1,1,1,2,2,3]
Parallel
```

Problem 4 Solution

```
xS01:
x_1 = -2.7527
x_2 = 2.7366
x_3 = 1.0375
x_4 = -3.8683
x_5 = 4.5085

xS02:
x_1 = -2.7527
x_2 = 2.7366
x_3 = 1.0375
x_4 = -3.8683
x_5 = 4.5085

xS03:
x_1 = -2.7527
x_2 = 2.7366
x_3 = 1.0375
x_4 = -3.8683
x_5 = 4.5085
```
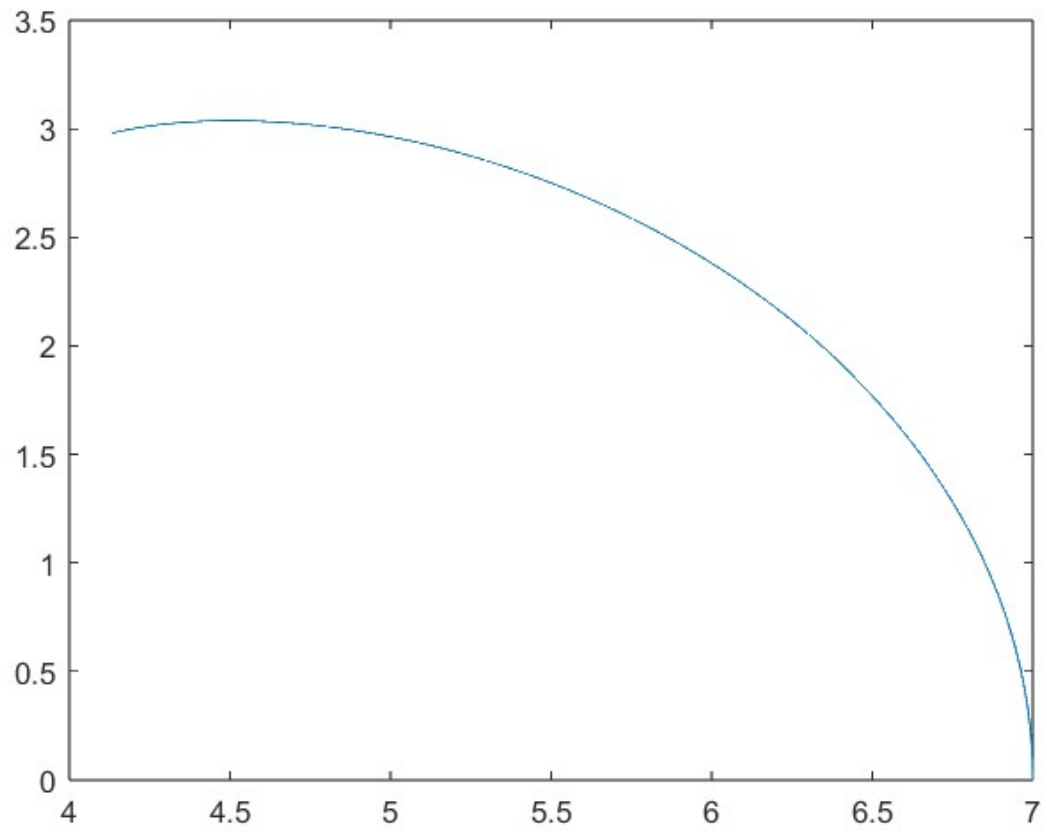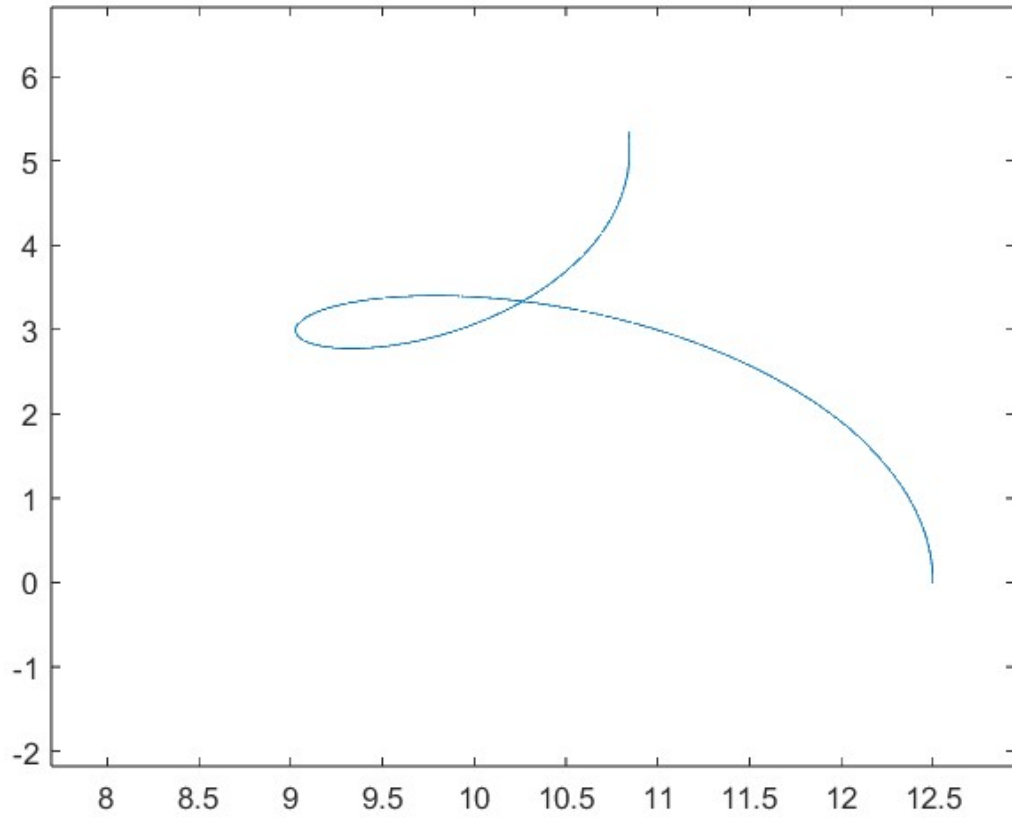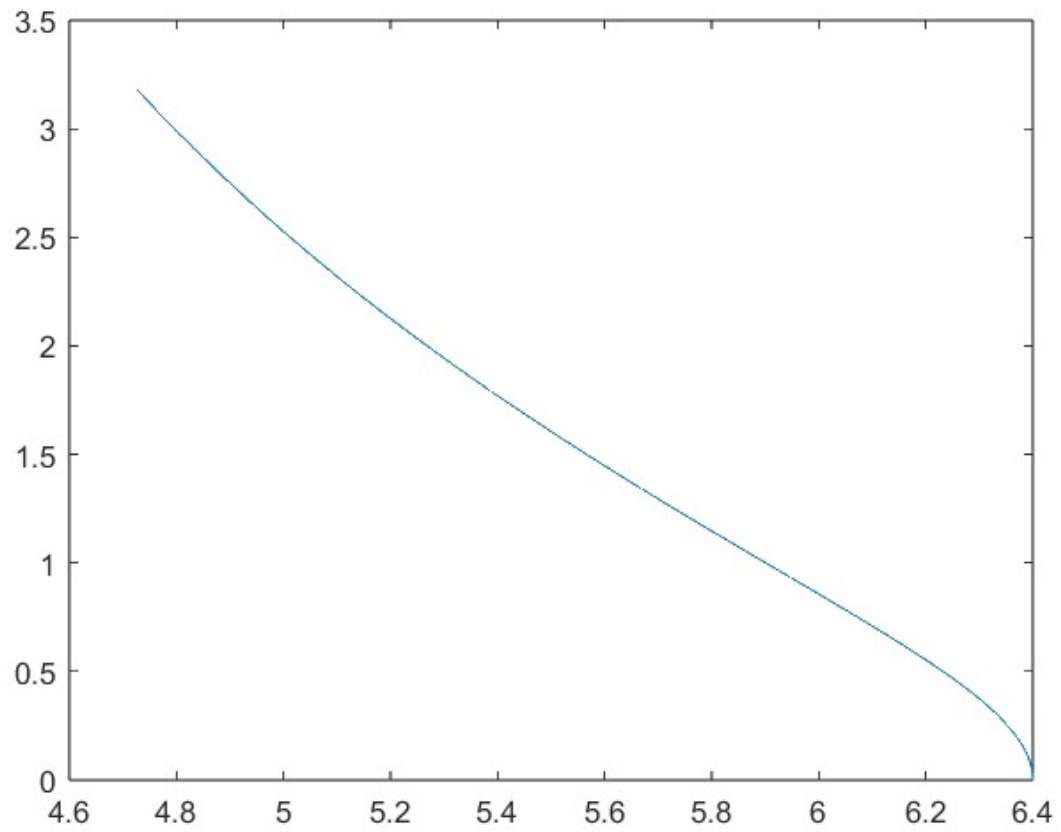
Problem 5 Solution

- Plot 1 (R = 5, r = 1 , d = 0.4)

- Plot 2 (R = 12, r = -1, d = 1.5)

- Plot 3 (R = 7, r= -1, d =1)

Problem 6 Solution

- N = 6 :

```
0     1     1     2     3     5     8
```

- N = 20 :

```
  Columns 1 through 7

0           1           1           2           3           5           8

  Columns 8 through 14

13          21          34          55          89          144
233

  Columns 15 through 21

377         610         987         1597        2584        4181
6765
```