

Topic 5 problems

1. Write a script that does the following.
 - a. Make a vector x of 10 random numbers uniformly distributed between 0 and 2π .
 - b. Plot the data points $(x, \sin(x))$ as red circles.
 - c. On the same axes, plot a smooth green line $y = \sin(x)$ through the data points.
2. Write a script that plots a circle of radius 2. Recall that the points on a circle can be written as $(R \cos(\theta), R \sin(\theta))$, where R is the radius and θ varies from 0° to 360° .
3. Write a function **solid.m** that takes as an argument the handle returned from plot and makes the data points of that plot into filled-in symbols, rather than the default outlined symbols. Test your function as follows:

```
x = linspace(-pi,pi,10);  
h = plot(x,sin(x),'ro-');  
solid(h);
```

Hint: Use set and get to examine and manipulate the handle graphics parameters Color and MarkerFaceColor.