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 theta varies from 0º to 360º.

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`.