CS101: Homework #4

This assignment is due by 02/27 for 002/004/006.

2.3

2. What do the following sets of statements do? What is the output from them?
   (a) radius = input('Enter circle radius:\n');
       area = pi * radius ^ 2;
       str = ['The area is ' num2str(area)];
       disp(str);
   (b) value = int2str(pi);
       disp(['The value is ' value ' ']);

3. What do the following sets of statements do? What is the output from them?
   value = 123.4567e2;
   fprintf('value = %e
', value);
   fprintf('value = %f
', value);
   fprintf('value = %g
', value);
   fprintf('value = %12.4f
', value);

2.4

1. Assume that a, b, c, and d are defined as follows, and calculate the results of the following
   operations if they are legal. If an operation is, explain why it is illegal.
   
   \[
   \begin{bmatrix}
   2 & 1 \\
   -1 & 2
   \end{bmatrix}
   \begin{bmatrix}
   0 & -1 \\
   3 & 1
   \end{bmatrix}
   =
   \begin{bmatrix}
   1 \\
   2
   \end{bmatrix}
   \]
   \[
   d = -3;
   \]
   
   (a) results = a .* c;
   (b) results = a * [c c];
   (c) results = a .* [c c];
   (d) results = a + b * c;
   (e) results = a + b .* c;;

2. Solve for x in the equation A x = B, where
   \[
   A = \begin{bmatrix}
   1 & 2 & 1 \\
   2 & 3 & 2 \\
   -1 & 0 & 1
   \end{bmatrix}
   \]
   and
   \[
   B = \begin{bmatrix}
   1 \\
   1 \\
   0
   \end{bmatrix}.
   \]