Homework 9

1. The shape factor for the deflection of a flat trapezoidal leaf spring is

Where B<1 is the ration of the ends of the trapezoid. Determine K when B = 0.6.

1. Create two vectors, one whose elements are an=2n-1 and the other whose elements are bn = 2n+1, n = 0,1,…,7. Determine the following:
2. a+b
3. a-b
4. a’b
5. ab’
6. Given the vector y = [0, -0.2, 0.4, -0.6, 0.8, -1.0, -1.2, -1.4, 1.6]. if z = sin(y), then:
7. Determine the minimum and maximum of only the negative values of z;
8. Determine the square root of only the positive values of z.
9. Plot y = 2+7sin(x) with both blue dashed lines and red stars, where x is from -2π to 2π. Use at least 100 points to plot. Label the xy-axis and put a title to your graph.
10. Given the following system of equations

Determine the values of s,u,p and w.