Assignment 1.1: Solve this part of the assignment without using MATLAB (except for Q1) or calculators for major parts of your answers. All steps have to be specified to receive full credit. No partial credit will be awarded even if the answer is correct. Write your answer sheet properly. Points will be deducted for scribbling and improperly presented answers

1. Shuffle the random number generator ('rng'). Create two random 2x3 matrices and save them as 'A' and 'B'

2. Evaluate the outcome of following two operations for the matrices created in Q1
   a. A.*B
   b. A*B
   c. A*B^T

3. If

   C=[1,2,3,4,5,6,7]
   D=[3,1,-2,0,0,9,-11]

   then, evaluate the outcome of the following condition

   (((min (C) + min (D))==-10) && max(D.^2)>=200) || (D(3)+C(1,5))<50

4. For the array 'C' in question 3, compute the output of the script mentioned below,

   Y=zeros(size(C));
   for i=1:length(C)
           if C(i)>=4
                   Y(i)=1;
           end
   end
   Y

5. For the 4x4 matrix below find the rank and inverse using Adjoint/Determinant method and then again using Gaussian Elimination method (Reduction of augmented matrix).

$$E = \begin{bmatrix} 1 & 3 & 6 & -2 \\ 1 & 1 & -1 & -5 \\ 3 & 1 & 0 & 6 \\ -2 & 7 & -3 & 1 \end{bmatrix}$$

Assignment 1.2: Solve this part of the assignment using MATLAB only. Prepare your script/s and take their prints. Explain your process using comments

6. Solve the following set of linear equation for variables x,y,z and w

$$x + 3y + 6z - 2w = 2$$
$$x + y - z - 5w = -6$$
$$3x + y + 6w = 3$$
$$-2x + 7y - 3z + w = 11$$

7. Interpolate the dataset using linear and cubic(spline) interpolation for x=2.33 and 4.5

X	Y
0	15
1	10
2	9
3	6
4	2
5	0

8. Redo Homework 3.2