FIGURE:E vs k GRAPH for different p

Question 7:

COMMENTS:

1)This graph plots Expected no. of tests vs K(no. of persons) in case 2 for some p values.

2) As P is increasing the graph tends towards y=x because as the probability of a person having the disease is high which means the no. of tests that to be performed tends to k+1 as there are k people .
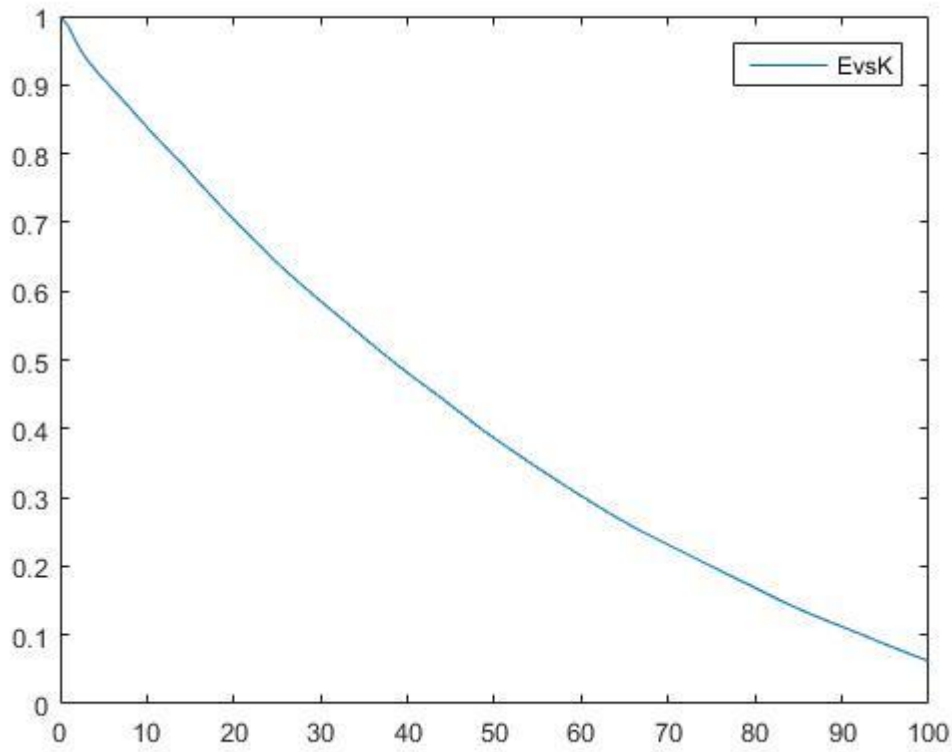
QUESTION 8:

Q8b)

FIGURE2:E vs K graph

COMMENTS:

1)At z=0 the correlation coefficient is 1 as the matrices are same.

2)The function is decreasing because the correlation coefficient decreases when z is increasing

Q8c)

CASE	Std.deviation	QMI	Absolute sum

Not Randomized	0.9841	0.0359	1.4736
Randomized	0.3947	0.0013	0.4444

Comments:

1)As the pixel intensities are randomized the values becomes random and more independent which results in decrease of Pxy(x,y)-Px*Py which means that the QMI decreases and the same as with the absolute sum that is Normalized Sum.

2)In randomized the values are not related X1 and X2 and their correlation coefiicient almost tends to zero.

3)The minimum value of normalized sum is zero when both random values are independent that is Pxy(x,y) =Px*Py. For all bins.

4)The maximum value is 2 when the correlation coefficient of X1 and X2 have correlation coefficient -1.