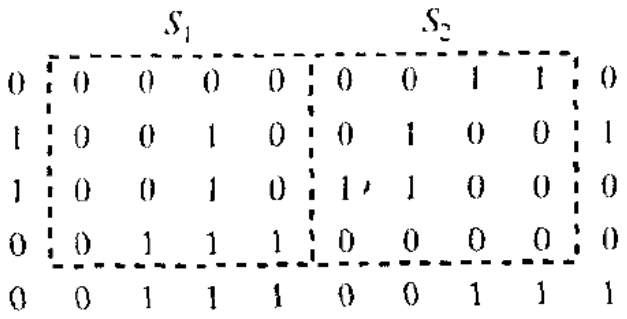
Q1. A common measure of transmission for digital data is the baud rate, defined as the number of bits transmitted per second. Generally, transmission is accomplished in packets consisting of a start bit, a byte of information, and a stop bit. Using these facts, answer the following:

1. How many minute would it take to transmit a 1024*1024 image with 256 gray levels using a 56K baud modem?
2. What would the time at 750K baud a representative speed of a phone DSL(digital subscriber line) connection?

Q2. Consider the two image subset, S1 and S2, shown in the following figure. For V={1}, determine whether these two subsets are: (a) 4-adjacent, (b) 8-adjacent or (c) m-adjacent.



Q3. Perform histogram equalization in the range (1-7) on the following 8*8 image. Distribution is given below.

r_k	0	1	2	3	4	5	6	7
No. of pixel	8	10	10	2	12	16	4	2