# Assignment 23

1.
1000*0.5 = 500KB
100*5 = 500KB
10*50 = 500KB

10KB cluster system:
9.5kb of storage lost per 0.5KB file and 5KB of storage lost per 5KB for a total of 10000KB lost (9500+5000)

1kB cluster system:
500KB of storage lost due to internal fragmentation (0.5KB for each of the 1000 0.5KB files

0.5KB cluster system:
No amount of storage lost due to internal fragmentation

2.
a.
As we can see in the answer to question 1, for the 10KB cluster system and the 1KB cluster system more than 1500KB are required, where as for the 0.5KB cluster system all of the 1110 files can be managed.

b.
Total size: 1500KB
16bit = 2B

10KB cluster system = 10240B:
150 clusters

150*2 = 300 / 10240 = 1 cluster

1kB cluster system = 1024B:
1500 clusters

1500*2 = 3000 / 1024 = 3 clusters

0.5KB cluster system = 512B:
3000 clusters

3000*2 = 6000 / 512 = 12 clusters