

Problem 2

1. Assume our system uses LRU page replacement policy. Fill in the following table.

time	0	1	2	3	4	5	6	7	8	9	10	
Referencing page	-	3	4	2	6	4	3	7	4	3	6	
Stack contents	-	3	3	3								Page Absent time
After	-	-	4	4								
reference	-	-	-	2								
Page absent?	F	T	T	T								

2. Assume the hit rate of LRU page replacement is 80%, while random page replacement policy has 70% hit rate. When using random policy, the cost is 100ns for accessing memory and 10ms for accessing disk. Assume LRU will spend additional 10ms too choose which page to evict among millions of pages in each miss. Calculate the AMAT of LRU and random.