CS 351 - FALL'11 - SECTION #3
SOLUTIONS OF QUIZ #2

Quiz Date: 21 October 2011

n = 100,000 records
R = 400 bytes
B = 2400 bytes
Bucket size = 10 blocks
btt = 0.4 ms
ebt = 0.5 ms
r = 5 ms
s = 10 ms

    a) 30% of the records are deleted. Find Ty.

       Ty = (b*ebt) +[(n/Bfr)*ebt]

       100,000*3/10 = 30,000 records are deleted. 70,000 records remain.
       Bfr = B/R = 2400/400 = 6
       b = n*R/B = 100,000 * 400 / 2400 = 100,000/6   means 16,667 blocks

       Ty = (16,667*0.5) + [(70,000/6)*0.5] = 8,333 + 5,833 = 14,166 ms