CprE 308
Section 3
Homework 2

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1) 4KB = 4 * 1024 = 4096
Page Number: 16390 / 4096 = 4
Offset: 16390 % 4096 = 6

2a) Addr: 10 + 16 + 22 + offset = 64
offset = 16 $\Rightarrow$ Page size = 2^{16}
2^{16} = 65536 $\rightarrow$ 65536 / 2014 = 64 KB

2b) # of Pages = Memory available / Page size $\Rightarrow$
2^{64} / 2^{16} = 2^{48} pages max

3a) Page 3 will be replaced, as it was loaded first.
3b) Page 1 will be replaced, as it was used last.
3c) Page 1 will be replaced, as it has not been referenced recently.
3d) Page 0 will be replaced, as the algorithm will skip pages 2 and 3 as their reference bits are 1, moving to the next page with a 0 reference bit (page 0).