

## Part1

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### Question 1

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a

Page 0, because it's R and M are both 0.

b

Page 2, because of earliest page.

c

Page 1, because the "last reference" is earliest.

d

Page 0. because it's R is 0.

### Question 2

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sort with "Last Reference"(FIFO):

N G H D A L C B

Last Reference: 3 5 7 8 18 19 23 32

R: 1 1 1 0 1 1 0 0

M: 1 1 0 1 1 0 1 0

We can see that 'D' page's R is 0 and it is the first 0, so page D will be replaced.

### Question 3

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#### Virtual Address

- limited by the word length in the machine
- points to a virtual store position viewed by a process

#### Physical Address

- limited by real memory size
- points to a position on a physical memory

## Question 4

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The only difference of clock and second chance is the details of implementation,  
so NO, there are no circumstances in which clock and second chance choose different pages to replace.

## Question 5

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page0 01101110

page1 01001001

page2 00110111

page3 10001011