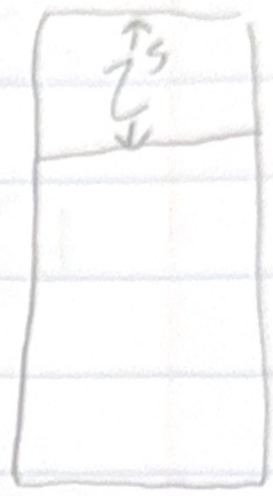
Mercedes Vanterpool

CSC 210 Worksheet 4

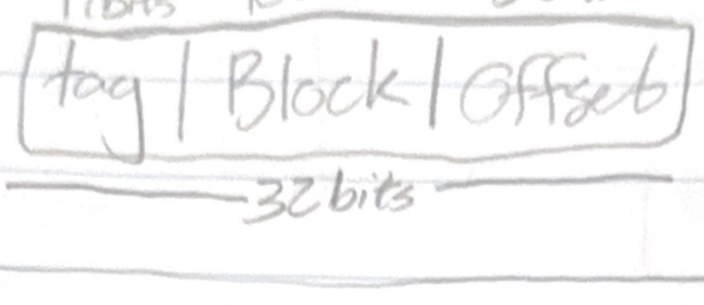
2.

a) 2^{27} blocks $2^{32}/2^5 = 2^{27}$ blocks

Blocks in cache: 2^{10}

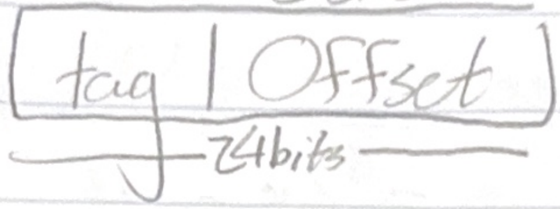


b)



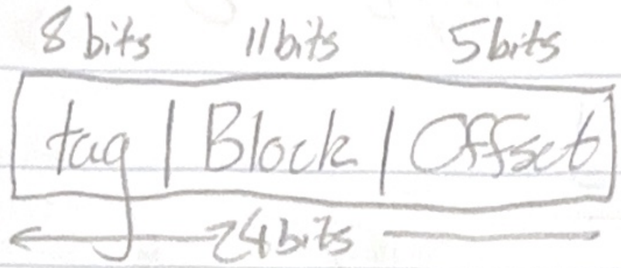
11.

a)



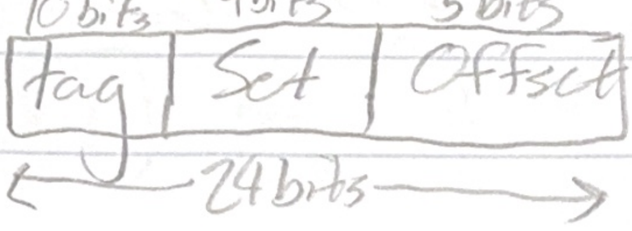
Blocks in cache $2^{16}/2^5 = 2^{11}$

b)



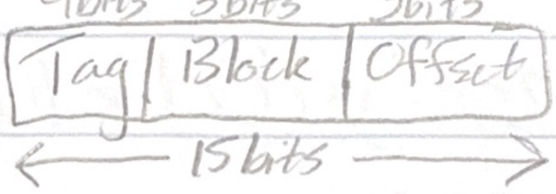
sets $2^{11}/2^2 = 2^9$

c)



10

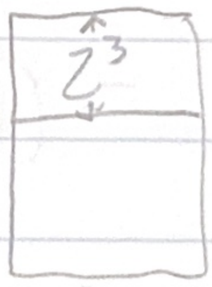
a)



loop 1: H=56 M=8

loop 2-4: H=62 M=2

Blocks in each 2^3



b) 88 $= \frac{242}{272}$

c) EAT = 58

$.88 \times 22 + (1-0.88) \times (300+22)$

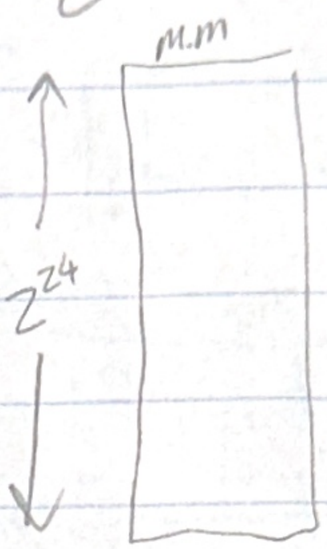
$19.36 + 012 \times 322$

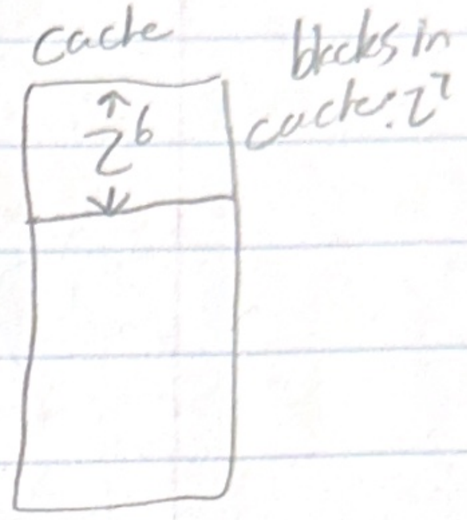
CSC 210 Worksheet 4

4.

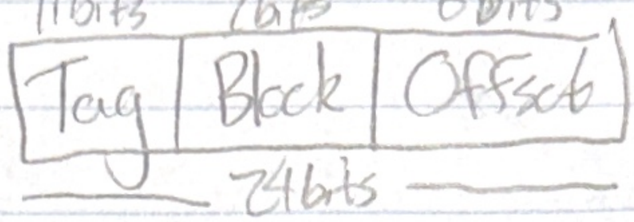
a) 2^{18} blocks

$2^{24} / 2^{6} = 2^{18}$





b)



c) Block 100001 or 33

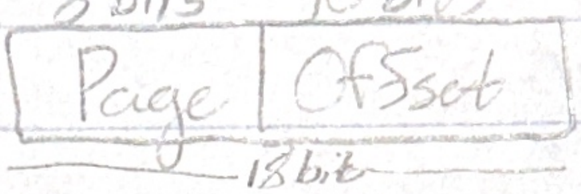
Block	offset
100001	110010

0000 0001 1011 1000 0111 0010

2.

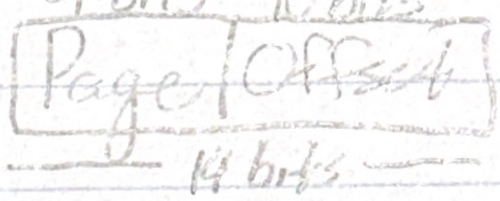
$2^{18} / 2^{10} = 2^{8}$

a) VA



$2^{14} / 2^{10} = 2^{4}$

b) PA



3.

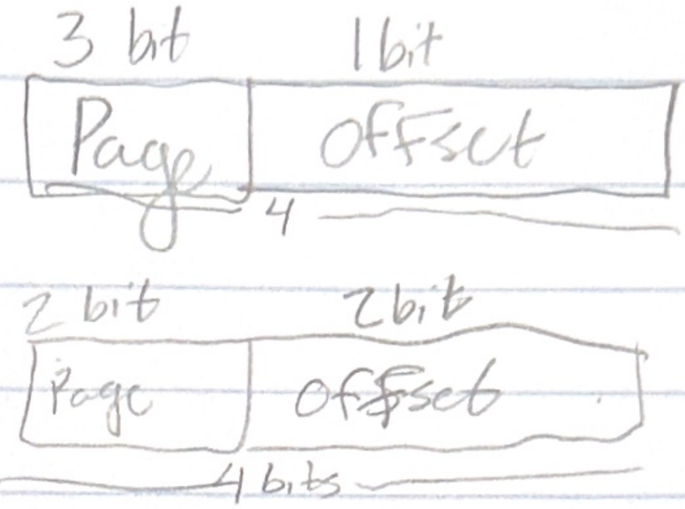
$= (0.9 \times 200) + (0.1 \times 7000) + (0.1 \times 10{,}000{,}000)$

$= 300 + 1{,}000{,}000$

$= \boxed{1{,}000{,}200 ns}$

CSC 210 Worksheet 4

4.



a) VM: "Yes pg 5 has no frame"

b) PM: PO

c) DNE

d) No, MO present in physical memory

e) MO

frame	offset
6	0
110	0

g) 110 page 3 offset 0

f) 0111 page 3 offset 1