2. Assuming a 1 KB (1024 bytes) page size, what are the page numbers and offsets for

the following address references (provided as decimal numbers):

a. 2375 = 2375 /1024 , p= 2 d= 327

b. 19366 = 19366 /1024, p= 18 d=934

c. 30000 = 30000/1024, p= 29 d= 304

e. 16385 =16385/1024, p=16, d=1

9.7 Assuming a 2-KB page size, what are the page numbers and offsets for the following address references (provided as decimal numbers):

= 2-KB(2\*1024=2048 )

a. 3085 =3085/2048 = p= 1 d= 1037

b. 42095 =42095/2048= p= 20 d=1135

c. 215201 =215201/2048= p=105 d=161

d. 650000 =650000/2048= p=317 d= 784

e. 2000001 =2000001/2048 = p=976 d=1153

3. Consider a logical address space of 64 pages of 1024 words each, mapped onto a physical memory of 32 frames. .

1. How many bits are there in the logical address?

64 pages = (2^6)

Page size= 1024 words = (2^10)

Bits in logical address space= (6+10)= 16 bits

Page Table Entries= Logical Address space / page size= (2^16) / (2^10) = (2^6)

1. How many bits are there in the physical address?

32 frames= (2^5)

Page size= 1024 words = (2^10)

Bits in Physical Address Space= (5+10) =15 bits

9.9: Consider a logical address space of 256 pages with a 4-KB page size, mapped onto a physical memory of 64 frames.

1. How many bits are required in the logical address?

256 pages = (2^8)

Page size = 4KB= (2^2)(2^10)=(2^12)

Bits in Logical Address Space = (12+8)= 20 bits

Page Table entries= (2^20) /(2^12)= (2^8)

1. How many bits are required in the physical address?

Frames = 64 = (2^6)

Page size = 4KB= (2^2)(2^10)=(2^12)

Bits in Physical Address Space =(6+12)= 18 bits

4. Consider a logical address space of 32 pages with 1KB page size;

mapped onto a physical memory of 16 frames.

1. How many bits are required in the logical address?

32 pages = (2^5)

Page size = (2^0).(2^10)= (2^10)

Bits in logical address space= (10+5)=15 bits

b. How many bits are required in the physical address?

Page size = (2^0).(2^10)= (2^10)

Frames = 16 =(2^4)

Bits in physical address space = (4+10) = 14 bits