

Sample Problem #1

- We have a machine with 4GiB of RAM
- We have a page size of 8KiB
- We allow processes to have 1GiB address spaces
- How many bits are used for physical addresses?
- How many bits are used for logical addresses?
- How many bits are used for logical page numbers?

Sample Problem #2

- 32-byte memory
- 16-byte address space
- 4-byte pages
- 4-bit logical addresses
- 5-bit physical addresses

0	a
1	b
2	c
3	d
4	e
5	f
6	g
7	h
8	i
9	j
10	k
11	l
12	m
13	n
14	o
15	p

logical memory

0	5
1	6
2	1
3	2

page table

0	
4	i j k l
8	m n o p
12	
16	
20	a b c d
24	e f g h
28	

physical memory

- What is the physical address corresponding to logical address 6?

Sample Problem #3

- Page size: 32KiB
- Logical addresses: 39 bits
- Page table entry size: 8 bytes
- Question: using 2-level paging, how is a logical address split into its 3 components (p1, p2, offset)?