

Tutorial 9 Part 1 Solution

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Parameters of Paging System

Virtual address space size 32k

Physical memory size 64k

Page size 4k

The format of the page table is simple:

The high-order (left-most) bit is the VALID bit.

If the bit is 1, the rest of the entry is the PFN.

If the bit is 0, the page is not valid.

Page Table (from entry 0 down to the max size)

VPN	Entry
0	0x80000002
1	0x00000000
2	0x00000000
3	0x80000004
4	0x80000009
5	0x80000003
6	0x00000000
7	0x8000000e

Virtual Address Trace

For each virtual address, write down the physical address it translates to OR check the Invalid button.

VADDR 0x783c (decimal: 30780) PADDR 0x OR ☐ Invalid

VADDR 0x3328 (decimal: 13096) PADDR 0x OR ☐ Invalid

VADDR 0x6e24 (decimal: 28196) PADDR 0x OR ☐ Invalid

• Question 1

– VADDR 0x783c has

* 0111100000111100 as binary number