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Solution

Simulator: pagetrans.py

Command: `python ./pagetrans.py -a 16k -p 1k -r 256k -s 104`

Solution:

Virtual Address Trace

| | |
|---------------------------------|-------------------------------|
| VA 0x00002463 (decimal: 9315)→ | RA 0x00019063 [VPN= 9] |
| VA 0x0000066a (decimal: 1642)→ | RA 0x0000ea6a [VPN= 1] |
| VA 0x00002641 (decimal: 9793)→ | RA 0x00019241 [VPN= 9] |
| VA 0x00003350 (decimal: 13136)→ | Invalid |
| VA 0x000034ff (decimal: 13567)→ | Invalid |

Simulator: pagetablesizes.py

Command: `python ./pagetablesizes.py -v 38 -e 4 -p 16k`

Solution:

Virtual Address (VA) = [Virtual Page Number (VPN) | Offset (D)]

| VA (bits) | VPN (bits) | D (bits) | pte (byte) |
|-----------|------------|-----------|------------|
| 38 | 24 | 14 | 4 |

Calculate (Linear Page Table Size) and write the results in the simplest readable form (e.g. byte, KB, MB, GB, and TB)

Linear Page Table Size = **67,108,864 bytes**