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## Solution

**Simulator:** pagetrans.py

**Command:** \_\_\_\_ **python ./pagetrans.py -a 8k -p 512 -r 64k -s 102**\_\_\_\_

**Solution:**

Virtual Address Trace

VA 0x00001573 (decimal: 5491) →	<b>Invalid</b> [VPN= <b>10 not valid</b> ]
VA 0x000007e2 (decimal: 2018) →	<b>Invalid</b> [VPN= <b>3 not valid</b> ]
VA 0x000002f1 (decimal: 753) →	<b>RA 0x1EF1 (decimal 7921)</b> [VPN= <b>1</b> ]
VA 0x00000aa7 (decimal: 2727) →	<b>Invalid</b> [VPN= <b>5</b> ]
VA 0x00001601 (decimal: 5633) →	<b>RA 0x7401 (decimal 29697)</b> [VPN= <b>11</b> ]

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**Simulator:** pagetablesize.py

**Command:** \_\_\_\_ **python ./pagetablesize.py -v 32 -p 8k -e 4**\_\_\_\_

**Solution:**

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

VA (bits)	VPN (bits)	D (bits)	pte (byte)
<b>32</b>	<b>19</b>	<b>13</b>	<b>4</b>

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 = No of entries in Table \* Size of each page Table entry**  
=  $2^{19} * 4$   
= **2097152 Bytes**  
= **2048 KB**  
= **2 MB**