Министерство науки и образования Российской Федерации

ФГБОУ ВО «Ульяновский государственный технический университет»

Кафедра «Вычислительная техника»

**Лабораторная работа №3**

Дисциплина: «Операционные системы»

«Менеджер виртуальной памяти»

Выполнил студент  
группы ИВТАCбд-31  
Долгов Д. П.

Проверила:  
преподаватель кафедры ВТ  
Беляев К. С.

Ульяновск, 2023

# Постановка задачи

Программа должна считать файл, содержащий логические адреса, и, используя TLB и таблицу страниц, преобразовать каждый логический адрес в соответствующий физический адрес и вывести значение байта, хранящегося по преобразованному физическому адресу. Используя моделирование, понять этапы преобразования логических адресов в физические. Это будет включать в себя устранение ошибок страниц с использованием подкачки по запросу, управление TLB и реализацию алгоритма замещения страниц.

Программа преобразует логические адреса в физические, используя TLB и таблицу страниц. Сначала номер страницы извлекается из логического адреса и проверяется на наличие в TLB. В случае наличия в TLB номер фрейма извлекается из TLB. В случае отсутствия в TLB необходимо обратиться к таблице страниц. В последнем случае либо номер фрейма извлекается из таблицы страниц, либо возникает ошибка страницы.

При возникновении ошибки страницы программа должна прочитать 256-байтовую страницу из файла резервных страниц и сохраните ее в доступном фрейме физической памяти.

После завершения ваша программа должна сообщить следующую статистику:  
1) Частота ошибок страниц – процент ссылок на адреса, которые привели к ошибкам страниц.  
2) Частота попаданий в TLB – процент адресных ссылок, которые были найдены в TLB.

# Пример работы программы

| **Верный файл** | **Вывод программы** |
| --- | --- |
| Virtual address: 16916 Physical address: 20 Value: 0  Virtual address: 62493 Physical address: 285 Value: 0  Virtual address: 30198 Physical address: 758 Value: 29  Virtual address: 53683 Physical address: 947 Value: 108  Virtual address: 40185 Physical address: 1273 Value: 0  Virtual address: 28781 Physical address: 1389 Value: 0  Virtual address: 24462 Physical address: 1678 Value: 23  Virtual address: 48399 Physical address: 1807 Value: 67  Virtual address: 64815 Physical address: 2095 Value: 75  Virtual address: 18295 Physical address: 2423 Value: -35  Virtual address: 12218 Physical address: 2746 Value: 11  Virtual address: 22760 Physical address: 3048 Value: 0  Virtual address: 57982 Physical address: 3198 Value: 56  Virtual address: 27966 Physical address: 3390 Value: 27  Virtual address: 54894 Physical address: 3694 Value: 53  Virtual address: 38929 Physical address: 3857 Value: 0  Virtual address: 32865 Physical address: 4193 Value: 0  Virtual address: 64243 Physical address: 4595 Value: -68  Virtual address: 2315 Physical address: 4619 Value: 66  Virtual address: 64454 Physical address: 5062 Value: 62  Virtual address: 55041 Physical address: 5121 Value: 0  Virtual address: 18633 Physical address: 5577 Value: 0  Virtual address: 14557 Physical address: 5853 Value: 0  Virtual address: 61006 Physical address: 5966 Value: 59  Virtual address: 62615 Physical address: 407 Value: 37  Virtual address: 7591 Physical address: 6311 Value: 105  Virtual address: 64747 Physical address: 6635 Value: 58  Virtual address: 6727 Physical address: 6727 Value: -111  Virtual address: 32315 Physical address: 6971 Value: -114  Virtual address: 60645 Physical address: 7397 Value: 0  Virtual address: 6308 Physical address: 7588 Value: 0  Virtual address: 45688 Physical address: 7800 Value: 0  Virtual address: 969 Physical address: 8137 Value: 0  Virtual address: 40891 Physical address: 8379 Value: -18  Virtual address: 49294 Physical address: 8590 Value: 48  Virtual address: 41118 Physical address: 8862 Value: 40  Virtual address: 21395 Physical address: 9107 Value: -28  Virtual address: 6091 Physical address: 9419 Value: -14  Virtual address: 32541 Physical address: 9501 Value: 0  Virtual address: 17665 Physical address: 9729 Value: 0  Virtual address: 3784 Physical address: 10184 Value: 0  Virtual address: 28718 Physical address: 1326 Value: 28  Virtual address: 59240 Physical address: 10344 Value: 0  Virtual address: 40178 Physical address: 1266 Value: 39  Virtual address: 60086 Physical address: 10678 Value: 58  Virtual address: 42252 Physical address: 10764 Value: 0  Virtual address: 44770 Physical address: 11234 Value: 43  Virtual address: 22514 Physical address: 11506 Value: 21  Virtual address: 3067 Physical address: 11771 Value: -2  Virtual address: 15757 Physical address: 11917 Value: 0  Virtual address: 31649 Physical address: 12193 Value: 0  Virtual address: 10842 Physical address: 12378 Value: 10  Virtual address: 43765 Physical address: 12789 Value: 0  Virtual address: 33405 Physical address: 12925 Value: 0  Virtual address: 44954 Physical address: 13210 Value: 43  Virtual address: 56657 Physical address: 13393 Value: 0  Virtual address: 5003 Physical address: 13707 Value: -30  Virtual address: 50227 Physical address: 13875 Value: 12  Virtual address: 19358 Physical address: 14238 Value: 18  Virtual address: 36529 Physical address: 14513 Value: 0  Virtual address: 10392 Physical address: 14744 Value: 0  Virtual address: 58882 Physical address: 14850 Value: 57  Virtual address: 5129 Physical address: 15113 Value: 0  Virtual address: 58554 Physical address: 15546 Value: 57  Virtual address: 58584 Physical address: 15576 Value: 0  Virtual address: 27444 Physical address: 15668 Value: 0  Virtual address: 58982 Physical address: 14950 Value: 57  Virtual address: 51476 Physical address: 15892 Value: 0  Virtual address: 6796 Physical address: 6796 Value: 0  Virtual address: 21311 Physical address: 9023 Value: -49  Virtual address: 30705 Physical address: 16369 Value: 0  Virtual address: 28964 Physical address: 16420 Value: 0  Virtual address: 41003 Physical address: 8747 Value: 10  Virtual address: 20259 Physical address: 16675 Value: -56  Virtual address: 57857 Physical address: 3073 Value: 0  Virtual address: 63258 Physical address: 16922 Value: 61  Virtual address: 36374 Physical address: 14358 Value: 35  Virtual address: 692 Physical address: 17332 Value: 0  Virtual address: 43121 Physical address: 17521 Value: 0  Virtual address: 48128 Physical address: 17664 Value: 0  Virtual address: 34561 Physical address: 17921 Value: 0  Virtual address: 49213 Physical address: 8509 Value: 0  Virtual address: 36922 Physical address: 18234 Value: 36  Virtual address: 59162 Physical address: 10266 Value: 57  Virtual address: 50552 Physical address: 18552 Value: 0  Virtual address: 17866 Physical address: 9930 Value: 17  Virtual address: 18145 Physical address: 18913 Value: 0  Virtual address: 3884 Physical address: 18988 Value: 0  Virtual address: 54388 Physical address: 19316 Value: 0  Virtual address: 42932 Physical address: 19636 Value: 0  Virtual address: 46919 Physical address: 19783 Value: -47  Virtual address: 58892 Physical address: 14860 Value: 0  Virtual address: 8620 Physical address: 20140 Value: 0  Virtual address: 38336 Physical address: 20416 Value: 0  Virtual address: 64357 Physical address: 4965 Value: 0  Virtual address: 23387 Physical address: 20571 Value: -42  Virtual address: 42632 Physical address: 20872 Value: 0  Virtual address: 15913 Physical address: 21033 Value: 0  Virtual address: 15679 Physical address: 11839 Value: 79  Virtual address: 22501 Physical address: 11493 Value: 0  Virtual address: 37540 Physical address: 21412 Value: 0  Virtual address: 5527 Physical address: 21655 Value: 101  Virtual address: 63921 Physical address: 21937 Value: 0  Virtual address: 62716 Physical address: 508 Value: 0  Virtual address: 32874 Physical address: 4202 Value: 32  Virtual address: 64390 Physical address: 4998 Value: 62  Virtual address: 63101 Physical address: 22141 Value: 0  Virtual address: 61802 Physical address: 22378 Value: 60  Virtual address: 19648 Physical address: 22720 Value: 0  Virtual address: 29031 Physical address: 16487 Value: 89  Virtual address: 44981 Physical address: 13237 Value: 0  Virtual address: 28092 Physical address: 3516 Value: 0  Virtual address: 9448 Physical address: 23016 Value: 0  Virtual address: 44744 Physical address: 11208 Value: 0  Virtual address: 61496 Physical address: 23096 Value: 0  Virtual address: 31453 Physical address: 23517 Value: 0  Virtual address: 60746 Physical address: 23626 Value: 59  Virtual address: 12199 Physical address: 2727 Value: -23  Virtual address: 62255 Physical address: 23855 Value: -53  Virtual address: 21793 Physical address: 24097 Value: 0  Virtual address: 26544 Physical address: 24496 Value: 0  Virtual address: 14964 Physical address: 24692 Value: 0  Virtual address: 41462 Physical address: 25078 Value: 40  Virtual address: 56089 Physical address: 25113 Value: 0  Virtual address: 52038 Physical address: 25414 Value: 50  Virtual address: 47982 Physical address: 25710 Value: 46  Virtual address: 59484 Physical address: 25948 Value: 0  Virtual address: 50924 Physical address: 26348 Value: 0  Virtual address: 6942 Physical address: 26398 Value: 6  Virtual address: 34998 Physical address: 26806 Value: 34  Virtual address: 27069 Physical address: 27069 Value: 0  Virtual address: 51926 Physical address: 27350 Value: 50  Virtual address: 60645 Physical address: 7397 Value: 0  Virtual address: 43181 Physical address: 17581 Value: 0  Virtual address: 10559 Physical address: 27455 Value: 79  Virtual address: 4664 Physical address: 27704 Value: 0  Virtual address: 28578 Physical address: 28066 Value: 27  Virtual address: 59516 Physical address: 25980 Value: 0  Virtual address: 38912 Physical address: 3840 Value: 0  Virtual address: 63562 Physical address: 28234 Value: 62  Virtual address: 64846 Physical address: 2126 Value: 63  Virtual address: 62938 Physical address: 28634 Value: 61  Virtual address: 27194 Physical address: 28730 Value: 26  Virtual address: 28804 Physical address: 1412 Value: 0  Virtual address: 61703 Physical address: 22279 Value: 65  Virtual address: 10998 Physical address: 12534 Value: 10  Virtual address: 6596 Physical address: 29124 Value: 0  Virtual address: 37721 Physical address: 29273 Value: 0  Virtual address: 43430 Physical address: 29606 Value: 42  Virtual address: 22692 Physical address: 2980 Value: 0  Virtual address: 62971 Physical address: 28667 Value: 126  Virtual address: 47125 Physical address: 29717 Value: 0  Virtual address: 52521 Physical address: 29993 Value: 0  Virtual address: 34646 Physical address: 18006 Value: 33  Virtual address: 32889 Physical address: 4217 Value: 0  Virtual address: 13055 Physical address: 30463 Value: -65  Virtual address: 65416 Physical address: 30600 Value: 0  Virtual address: 62869 Physical address: 28565 Value: 0  Virtual address: 57314 Physical address: 30946 Value: 55  Virtual address: 12659 Physical address: 31091 Value: 92  Virtual address: 14052 Physical address: 31460 Value: 0  Virtual address: 32956 Physical address: 4284 Value: 0  Virtual address: 49273 Physical address: 8569 Value: 0  Virtual address: 50352 Physical address: 14000 Value: 0  Virtual address: 49737 Physical address: 31561 Value: 0  Virtual address: 15555 Physical address: 31939 Value: 48  Virtual address: 47475 Physical address: 32115 Value: 92  Virtual address: 15328 Physical address: 32480 Value: 0  Virtual address: 34621 Physical address: 17981 Value: 0  Virtual address: 51365 Physical address: 32677 Value: 0  Virtual address: 32820 Physical address: 4148 Value: 0  Virtual address: 48855 Physical address: 32983 Value: -75  Virtual address: 12224 Physical address: 2752 Value: 0  Virtual address: 2035 Physical address: 33267 Value: -4  Virtual address: 60539 Physical address: 7291 Value: 30  Virtual address: 14595 Physical address: 33283 Value: 64  Virtual address: 13853 Physical address: 31261 Value: 0  Virtual address: 24143 Physical address: 33615 Value: -109  Virtual address: 15216 Physical address: 32368 Value: 0  Virtual address: 8113 Physical address: 33969 Value: 0  Virtual address: 22640 Physical address: 2928 Value: 0  Virtual address: 32978 Physical address: 4306 Value: 32  Virtual address: 39151 Physical address: 4079 Value: 59  Virtual address: 19520 Physical address: 22592 Value: 0  Virtual address: 58141 Physical address: 34077 Value: 0  Virtual address: 63959 Physical address: 21975 Value: 117  Virtual address: 53040 Physical address: 34352 Value: 0  Virtual address: 55842 Physical address: 34594 Value: 54  Virtual address: 585 Physical address: 17225 Value: 0  Virtual address: 51229 Physical address: 32541 Value: 0  Virtual address: 64181 Physical address: 4533 Value: 0  Virtual address: 54879 Physical address: 3679 Value: -105  Virtual address: 28210 Physical address: 34866 Value: 27  Virtual address: 10268 Physical address: 14620 Value: 0  Virtual address: 15395 Physical address: 31779 Value: 8  Virtual address: 12884 Physical address: 30292 Value: 0  Virtual address: 2149 Physical address: 35173 Value: 0  Virtual address: 53483 Physical address: 35563 Value: 58  Virtual address: 59606 Physical address: 26070 Value: 58  Virtual address: 14981 Physical address: 24709 Value: 0  Virtual address: 36672 Physical address: 35648 Value: 0  Virtual address: 23197 Physical address: 35997 Value: 0  Virtual address: 36518 Physical address: 14502 Value: 35  Virtual address: 13361 Physical address: 36145 Value: 0  Virtual address: 19810 Physical address: 36450 Value: 19  Virtual address: 25955 Physical address: 36707 Value: 88  Virtual address: 62678 Physical address: 470 Value: 61  Virtual address: 26021 Physical address: 36773 Value: 0  Virtual address: 29409 Physical address: 37089 Value: 0  Virtual address: 38111 Physical address: 37343 Value: 55  Virtual address: 58573 Physical address: 15565 Value: 0  Virtual address: 56840 Physical address: 37384 Value: 0  Virtual address: 41306 Physical address: 24922 Value: 40  Virtual address: 54426 Physical address: 19354 Value: 53  Virtual address: 3617 Physical address: 10017 Value: 0  Virtual address: 50652 Physical address: 18652 Value: 0  Virtual address: 41452 Physical address: 25068 Value: 0  Virtual address: 20241 Physical address: 16657 Value: 0  Virtual address: 31723 Physical address: 12267 Value: -6  Virtual address: 53747 Physical address: 1011 Value: 124  Virtual address: 28550 Physical address: 28038 Value: 27  Virtual address: 23402 Physical address: 20586 Value: 22  Virtual address: 21205 Physical address: 37845 Value: 0  Virtual address: 56181 Physical address: 25205 Value: 0  Virtual address: 57470 Physical address: 38014 Value: 56  Virtual address: 39933 Physical address: 38397 Value: 0  Virtual address: 34964 Physical address: 26772 Value: 0  Virtual address: 24781 Physical address: 38605 Value: 0  Virtual address: 41747 Physical address: 38675 Value: -60  Virtual address: 62564 Physical address: 356 Value: 0  Virtual address: 58461 Physical address: 15453 Value: 0  Virtual address: 20858 Physical address: 39034 Value: 20  Virtual address: 49301 Physical address: 8597 Value: 0  Virtual address: 40572 Physical address: 39292 Value: 0  Virtual address: 23840 Physical address: 39456 Value: 0  Virtual address: 35278 Physical address: 39886 Value: 34  Virtual address: 62905 Physical address: 28601 Value: 0  Virtual address: 56650 Physical address: 13386 Value: 55  Virtual address: 11149 Physical address: 40077 Value: 0  Virtual address: 38920 Physical address: 3848 Value: 0  Virtual address: 23430 Physical address: 20614 Value: 22  Virtual address: 57592 Physical address: 38136 Value: 0  Virtual address: 3080 Physical address: 40200 Value: 0  Virtual address: 6677 Physical address: 6677 Value: 0  Virtual address: 50704 Physical address: 26128 Value: 0  Virtual address: 51883 Physical address: 27307 Value: -86  Virtual address: 62799 Physical address: 28495 Value: 83  Virtual address: 20188 Physical address: 40668 Value: 0  Virtual address: 1245 Physical address: 40925 Value: 0  Virtual address: 12220 Physical address: 2748 Value: 0  Virtual address: 17602 Physical address: 41154 Value: 17  Virtual address: 28609 Physical address: 28097 Value: 0  Virtual address: 42694 Physical address: 20934 Value: 41  Virtual address: 29826 Physical address: 41346 Value: 29  Virtual address: 13827 Physical address: 31235 Value: -128  Virtual address: 27336 Physical address: 28872 Value: 0  Virtual address: 53343 Physical address: 35423 Value: 23  Virtual address: 11533 Physical address: 41485 Value: 0  Virtual address: 41713 Physical address: 41969 Value: 0  Virtual address: 33890 Physical address: 42082 Value: 33  Virtual address: 4894 Physical address: 13598 Value: 4  Virtual address: 57599 Physical address: 38143 Value: 63  Virtual address: 3870 Physical address: 18974 Value: 3  Virtual address: 58622 Physical address: 15614 Value: 57  Virtual address: 29780 Physical address: 41300 Value: 0  Virtual address: 62553 Physical address: 345 Value: 0  Virtual address: 2303 Physical address: 35327 Value: 63  Virtual address: 51915 Physical address: 27339 Value: -78  Virtual address: 6251 Physical address: 7531 Value: 26  Virtual address: 38107 Physical address: 37339 Value: 54  Virtual address: 59325 Physical address: 10429 Value: 0  Virtual address: 61295 Physical address: 42351 Value: -37  Virtual address: 26699 Physical address: 42571 Value: 18  Virtual address: 51188 Physical address: 42996 Value: 0  Virtual address: 59519 Physical address: 25983 Value: 31  Virtual address: 7345 Physical address: 43185 Value: 0  Virtual address: 20325 Physical address: 16741 Value: 0  Virtual address: 39633 Physical address: 43473 Value: 0  Virtual address: 1562 Physical address: 43546 Value: 1  Virtual address: 7580 Physical address: 6300 Value: 0  Virtual address: 8170 Physical address: 34026 Value: 7  Virtual address: 62256 Physical address: 23856 Value: 0  Virtual address: 35823 Physical address: 44015 Value: -5  Virtual address: 27790 Physical address: 44174 Value: 27  Virtual address: 13191 Physical address: 44423 Value: -31  Virtual address: 9772 Physical address: 44588 Value: 0  Virtual address: 7477 Physical address: 6197 Value: 0  Virtual address: 44455 Physical address: 44967 Value: 105  Virtual address: 59546 Physical address: 26010 Value: 58  Virtual address: 49347 Physical address: 8643 Value: 48  Virtual address: 36539 Physical address: 14523 Value: -82  Virtual address: 12453 Physical address: 45221 Value: 0  Virtual address: 49640 Physical address: 45544 Value: 0  Virtual address: 28290 Physical address: 34946 Value: 27  Virtual address: 44817 Physical address: 13073 Value: 0  Virtual address: 8565 Physical address: 20085 Value: 0  Virtual address: 16399 Physical address: 45583 Value: 3  Virtual address: 41934 Physical address: 38862 Value: 40  Virtual address: 45457 Physical address: 45969 Value: 0  Virtual address: 33856 Physical address: 42048 Value: 0  Virtual address: 19498 Physical address: 22570 Value: 19  Virtual address: 17661 Physical address: 41213 Value: 0  Virtual address: 63829 Physical address: 21845 Value: 0  Virtual address: 42034 Physical address: 46130 Value: 41  Virtual address: 28928 Physical address: 16384 Value: 0  Virtual address: 30711 Physical address: 16375 Value: -3  Virtual address: 8800 Physical address: 46432 Value: 0  Virtual address: 52335 Physical address: 46703 Value: 27  Virtual address: 38775 Physical address: 46967 Value: -35  Virtual address: 52704 Physical address: 30176 Value: 0  Virtual address: 24380 Physical address: 1596 Value: 0  Virtual address: 19602 Physical address: 22674 Value: 19  Virtual address: 57998 Physical address: 3214 Value: 56  Virtual address: 2919 Physical address: 11623 Value: -39  Virtual address: 8362 Physical address: 47274 Value: 8  Virtual address: 17884 Physical address: 9948 Value: 0  Virtual address: 45737 Physical address: 7849 Value: 0  Virtual address: 47894 Physical address: 25622 Value: 46  Virtual address: 59667 Physical address: 47379 Value: 68  Virtual address: 10385 Physical address: 14737 Value: 0  Virtual address: 52782 Physical address: 47662 Value: 51  Virtual address: 64416 Physical address: 5024 Value: 0  Virtual address: 40946 Physical address: 8434 Value: 39  Virtual address: 16778 Physical address: 48010 Value: 16  Virtual address: 27159 Physical address: 28695 Value: -123  Virtual address: 24324 Physical address: 1540 Value: 0  Virtual address: 32450 Physical address: 7106 Value: 31  Virtual address: 9108 Physical address: 48276 Value: 0  Virtual address: 65305 Physical address: 30489 Value: 0  Virtual address: 19575 Physical address: 22647 Value: 29  Virtual address: 11117 Physical address: 40045 Value: 0  Virtual address: 65170 Physical address: 48530 Value: 63  Virtual address: 58013 Physical address: 3229 Value: 0  Virtual address: 61676 Physical address: 23276 Value: 0  Virtual address: 63510 Physical address: 28182 Value: 62  Virtual address: 17458 Physical address: 41010 Value: 17  Virtual address: 54675 Physical address: 48787 Value: 100  Virtual address: 1713 Physical address: 43697 Value: 0  Virtual address: 55105 Physical address: 5185 Value: 0  Virtual address: 65321 Physical address: 30505 Value: 0  Virtual address: 45278 Physical address: 49118 Value: 44  Virtual address: 26256 Physical address: 49296 Value: 0  Virtual address: 64198 Physical address: 4550 Value: 62  Virtual address: 29441 Physical address: 49409 Value: 0  Virtual address: 1928 Physical address: 33160 Value: 0  Virtual address: 39425 Physical address: 43265 Value: 0  Virtual address: 32000 Physical address: 49664 Value: 0  Virtual address: 28549 Physical address: 28037 Value: 0  Virtual address: 46295 Physical address: 50135 Value: 53  Virtual address: 22772 Physical address: 3060 Value: 0  Virtual address: 58228 Physical address: 34164 Value: 0  Virtual address: 63525 Physical address: 28197 Value: 0  Virtual address: 32602 Physical address: 9562 Value: 31  Virtual address: 46195 Physical address: 50035 Value: 28  Virtual address: 55849 Physical address: 34601 Value: 0  Virtual address: 46454 Physical address: 50294 Value: 45  Virtual address: 7487 Physical address: 6207 Value: 79  Virtual address: 33879 Physical address: 42071 Value: 21  Virtual address: 42004 Physical address: 46100 Value: 0  Virtual address: 8599 Physical address: 20119 Value: 101  Virtual address: 18641 Physical address: 5585 Value: 0  Virtual address: 49015 Physical address: 50551 Value: -35  Virtual address: 26830 Physical address: 42702 Value: 26  Virtual address: 34754 Physical address: 18114 Value: 33  Virtual address: 14668 Physical address: 33356 Value: 0  Virtual address: 38362 Physical address: 20442 Value: 37  Virtual address: 38791 Physical address: 46983 Value: -31  Virtual address: 4171 Physical address: 50763 Value: 18  Virtual address: 45975 Physical address: 51095 Value: -27  Virtual address: 14623 Physical address: 33311 Value: 71  Virtual address: 62393 Physical address: 23993 Value: 0  Virtual address: 64658 Physical address: 6546 Value: 63  Virtual address: 10963 Physical address: 12499 Value: -76  Virtual address: 9058 Physical address: 48226 Value: 8  Virtual address: 51031 Physical address: 42839 Value: -43  Virtual address: 32425 Physical address: 7081 Value: 0  Virtual address: 45483 Physical address: 45995 Value: 106  Virtual address: 44611 Physical address: 11075 Value: -112  Virtual address: 63664 Physical address: 28336 Value: 0  Virtual address: 54920 Physical address: 3720 Value: 0  Virtual address: 7663 Physical address: 6383 Value: 123  Virtual address: 56480 Physical address: 51360 Value: 0  Virtual address: 1489 Physical address: 51665 Value: 0  Virtual address: 28438 Physical address: 27926 Value: 27  Virtual address: 65449 Physical address: 30633 Value: 0  Virtual address: 12441 Physical address: 45209 Value: 0  Virtual address: 58530 Physical address: 15522 Value: 57  Virtual address: 63570 Physical address: 28242 Value: 62  Virtual address: 26251 Physical address: 49291 Value: -94  Virtual address: 15972 Physical address: 21092 Value: 0  Virtual address: 35826 Physical address: 44018 Value: 34  Virtual address: 5491 Physical address: 21619 Value: 92  Virtual address: 54253 Physical address: 51949 Value: 0  Virtual address: 49655 Physical address: 45559 Value: 125  Virtual address: 5868 Physical address: 52204 Value: 0  Virtual address: 20163 Physical address: 40643 Value: -80  Virtual address: 51079 Physical address: 42887 Value: -31  Virtual address: 21398 Physical address: 9110 Value: 20  Virtual address: 32756 Physical address: 9716 Value: 0  Virtual address: 64196 Physical address: 4548 Value: 0  Virtual address: 43218 Physical address: 17618 Value: 42  Virtual address: 21583 Physical address: 52303 Value: 19  Virtual address: 25086 Physical address: 52734 Value: 24  Virtual address: 45515 Physical address: 46027 Value: 114  Virtual address: 12893 Physical address: 30301 Value: 0  Virtual address: 22914 Physical address: 52866 Value: 22  Virtual address: 58969 Physical address: 14937 Value: 0  Virtual address: 20094 Physical address: 40574 Value: 19  Virtual address: 13730 Physical address: 53154 Value: 13  Virtual address: 44059 Physical address: 53275 Value: 6  Virtual address: 28931 Physical address: 16387 Value: 64  Virtual address: 13533 Physical address: 36317 Value: 0  Virtual address: 33134 Physical address: 53614 Value: 32  Virtual address: 28483 Physical address: 27971 Value: -48  Virtual address: 1220 Physical address: 40900 Value: 0  Virtual address: 38174 Physical address: 20254 Value: 37  Virtual address: 53502 Physical address: 35582 Value: 52  Virtual address: 43328 Physical address: 29504 Value: 0  Virtual address: 4970 Physical address: 13674 Value: 4  Virtual address: 8090 Physical address: 33946 Value: 7  Virtual address: 2661 Physical address: 53861 Value: 0  Virtual address: 53903 Physical address: 54159 Value: -93  Virtual address: 11025 Physical address: 39953 Value: 0  Virtual address: 26627 Physical address: 42499 Value: 0  Virtual address: 18117 Physical address: 18885 Value: 0  Virtual address: 14505 Physical address: 5801 Value: 0  Virtual address: 61528 Physical address: 23128 Value: 0  Virtual address: 20423 Physical address: 16839 Value: -15  Virtual address: 26962 Physical address: 26962 Value: 26  Virtual address: 36392 Physical address: 14376 Value: 0  Virtual address: 11365 Physical address: 54373 Value: 0  Virtual address: 50882 Physical address: 26306 Value: 49  Virtual address: 41668 Physical address: 41924 Value: 0  Virtual address: 30497 Physical address: 16161 Value: 0  Virtual address: 36216 Physical address: 54648 Value: 0  Virtual address: 5619 Physical address: 21747 Value: 124  Virtual address: 36983 Physical address: 18295 Value: 29  Virtual address: 59557 Physical address: 26021 Value: 0  Virtual address: 36663 Physical address: 35639 Value: -51  Virtual address: 36436 Physical address: 14420 Value: 0  Virtual address: 37057 Physical address: 18369 Value: 0  Virtual address: 23585 Physical address: 54817 Value: 0  Virtual address: 58791 Physical address: 55207 Value: 105  Virtual address: 46666 Physical address: 55370 Value: 45  Virtual address: 64475 Physical address: 5083 Value: -10  Virtual address: 21615 Physical address: 52335 Value: 27  Virtual address: 41090 Physical address: 8834 Value: 40  Virtual address: 1771 Physical address: 43755 Value: -70  Virtual address: 47513 Physical address: 32153 Value: 0  Virtual address: 39338 Physical address: 55722 Value: 38  Virtual address: 1390 Physical address: 51566 Value: 1  Virtual address: 38772 Physical address: 46964 Value: 0  Virtual address: 58149 Physical address: 34085 Value: 0  Virtual address: 7196 Physical address: 43036 Value: 0  Virtual address: 9123 Physical address: 48291 Value: -24  Virtual address: 7491 Physical address: 6211 Value: 80  Virtual address: 62616 Physical address: 408 Value: 0  Virtual address: 15436 Physical address: 31820 Value: 0  Virtual address: 17491 Physical address: 41043 Value: 20  Virtual address: 53656 Physical address: 920 Value: 0  Virtual address: 26449 Physical address: 24401 Value: 0  Virtual address: 34935 Physical address: 26743 Value: 29  Virtual address: 19864 Physical address: 36504 Value: 0  Virtual address: 51388 Physical address: 32700 Value: 0  Virtual address: 15155 Physical address: 32307 Value: -52  Virtual address: 64775 Physical address: 2055 Value: 65  Virtual address: 47969 Physical address: 25697 Value: 0  Virtual address: 16315 Physical address: 55995 Value: -18  Virtual address: 1342 Physical address: 51518 Value: 1  Virtual address: 51185 Physical address: 42993 Value: 0  Virtual address: 6043 Physical address: 9371 Value: -26  Virtual address: 21398 Physical address: 9110 Value: 20  Virtual address: 3273 Physical address: 40393 Value: 0  Virtual address: 9370 Physical address: 22938 Value: 9  Virtual address: 35463 Physical address: 56199 Value: -95  Virtual address: 28205 Physical address: 34861 Value: 0  Virtual address: 2351 Physical address: 4655 Value: 75  Virtual address: 28999 Physical address: 16455 Value: 81  Virtual address: 47699 Physical address: 56403 Value: -108  Virtual address: 46870 Physical address: 19734 Value: 45  Virtual address: 22311 Physical address: 11303 Value: -55  Virtual address: 22124 Physical address: 56684 Value: 0  Virtual address: 22427 Physical address: 11419 Value: -26  Virtual address: 49344 Physical address: 8640 Value: 0  Virtual address: 23224 Physical address: 36024 Value: 0  Virtual address: 5514 Physical address: 21642 Value: 5  Virtual address: 20504 Physical address: 56856 Value: 0  Virtual address: 376 Physical address: 57208 Value: 0  Virtual address: 2014 Physical address: 33246 Value: 1  Virtual address: 38700 Physical address: 46892 Value: 0  Virtual address: 13098 Physical address: 44330 Value: 12  Virtual address: 62435 Physical address: 24035 Value: -8  Virtual address: 48046 Physical address: 25774 Value: 46  Virtual address: 63464 Physical address: 17128 Value: 0  Virtual address: 12798 Physical address: 31230 Value: 12  Virtual address: 51178 Physical address: 42986 Value: 49  Virtual address: 8627 Physical address: 20147 Value: 108  Virtual address: 27083 Physical address: 27083 Value: 114  Virtual address: 47198 Physical address: 29790 Value: 46  Virtual address: 44021 Physical address: 57589 Value: 0  Virtual address: 32792 Physical address: 4120 Value: 0  Virtual address: 43996 Physical address: 57564 Value: 0  Virtual address: 41126 Physical address: 8870 Value: 40  Virtual address: 64244 Physical address: 4596 Value: 0  Virtual address: 37047 Physical address: 18359 Value: 45  Virtual address: 60281 Physical address: 57721 Value: 0  Virtual address: 52904 Physical address: 47784 Value: 0  Virtual address: 7768 Physical address: 57944 Value: 0  Virtual address: 55359 Physical address: 58175 Value: 15  Virtual address: 3230 Physical address: 40350 Value: 3  Virtual address: 44813 Physical address: 13069 Value: 0  Virtual address: 4116 Physical address: 50708 Value: 0  Virtual address: 65222 Physical address: 48582 Value: 63  Virtual address: 28083 Physical address: 3507 Value: 108  Virtual address: 60660 Physical address: 7412 Value: 0  Virtual address: 39 Physical address: 58407 Value: 9  Virtual address: 328 Physical address: 57160 Value: 0  Virtual address: 47868 Physical address: 56572 Value: 0  Virtual address: 13009 Physical address: 30417 Value: 0  Virtual address: 22378 Physical address: 11370 Value: 21  Virtual address: 39304 Physical address: 55688 Value: 0  Virtual address: 11171 Physical address: 40099 Value: -24  Virtual address: 8079 Physical address: 33935 Value: -29  Virtual address: 52879 Physical address: 47759 Value: -93  Virtual address: 5123 Physical address: 15107 Value: 0  Virtual address: 4356 Physical address: 58628 Value: 0  Virtual address: 45745 Physical address: 7857 Value: 0  Virtual address: 32952 Physical address: 4280 Value: 0  Virtual address: 4657 Physical address: 27697 Value: 0  Virtual address: 24142 Physical address: 33614 Value: 23  Virtual address: 23319 Physical address: 20503 Value: -59  Virtual address: 13607 Physical address: 53031 Value: 73  Virtual address: 46304 Physical address: 50144 Value: 0  Virtual address: 17677 Physical address: 9741 Value: 0  Virtual address: 59691 Physical address: 47403 Value: 74  Virtual address: 50967 Physical address: 42775 Value: -59  Virtual address: 7817 Physical address: 57993 Value: 0  Virtual address: 8545 Physical address: 20065 Value: 0  Virtual address: 55297 Physical address: 58113 Value: 0  Virtual address: 52954 Physical address: 47834 Value: 51  Virtual address: 39720 Physical address: 38184 Value: 0  Virtual address: 18455 Physical address: 5399 Value: 5  Virtual address: 30349 Physical address: 59021 Value: 0  Virtual address: 63270 Physical address: 16934 Value: 61  Virtual address: 27156 Physical address: 28692 Value: 0  Virtual address: 20614 Physical address: 56966 Value: 20  Virtual address: 19372 Physical address: 14252 Value: 0  Virtual address: 48689 Physical address: 32817 Value: 0  Virtual address: 49386 Physical address: 8682 Value: 48  Virtual address: 50584 Physical address: 18584 Value: 0  Virtual address: 51936 Physical address: 27360 Value: 0  Virtual address: 34705 Physical address: 18065 Value: 0  Virtual address: 13653 Physical address: 53077 Value: 0  Virtual address: 50077 Physical address: 59293 Value: 0  Virtual address: 54518 Physical address: 19446 Value: 53  Virtual address: 41482 Physical address: 41738 Value: 40  Virtual address: 4169 Physical address: 50761 Value: 0  Virtual address: 36118 Physical address: 54550 Value: 35  Virtual address: 9584 Physical address: 59504 Value: 0  Virtual address: 18490 Physical address: 5434 Value: 18  Virtual address: 55420 Physical address: 58236 Value: 0  Virtual address: 5708 Physical address: 52044 Value: 0  Virtual address: 23506 Physical address: 20690 Value: 22  Virtual address: 15391 Physical address: 31775 Value: 7  Virtual address: 36368 Physical address: 14352 Value: 0  Virtual address: 38976 Physical address: 3904 Value: 0  Virtual address: 50406 Physical address: 14054 Value: 49  Virtual address: 49236 Physical address: 8532 Value: 0  Virtual address: 65035 Physical address: 48395 Value: -126  Virtual address: 30120 Physical address: 680 Value: 0  Virtual address: 62551 Physical address: 343 Value: 21  Virtual address: 46809 Physical address: 55513 Value: 0  Virtual address: 21687 Physical address: 52407 Value: 45  Virtual address: 53839 Physical address: 54095 Value: -109  Virtual address: 2098 Physical address: 35122 Value: 2  Virtual address: 12364 Physical address: 45132 Value: 0  Virtual address: 45366 Physical address: 45878 Value: 44  Virtual address: 50437 Physical address: 18437 Value: 0  Virtual address: 36675 Physical address: 35651 Value: -48  Virtual address: 55382 Physical address: 58198 Value: 54  Virtual address: 11846 Physical address: 59718 Value: 11  Virtual address: 49127 Physical address: 50663 Value: -7  Virtual address: 19900 Physical address: 36540 Value: 0  Virtual address: 20554 Physical address: 56906 Value: 20  Virtual address: 19219 Physical address: 14099 Value: -60  Virtual address: 51483 Physical address: 15899 Value: 70  Virtual address: 58090 Physical address: 3306 Value: 56  Virtual address: 39074 Physical address: 4002 Value: 38  Virtual address: 16060 Physical address: 21180 Value: 0  Virtual address: 10447 Physical address: 14799 Value: 51  Virtual address: 54169 Physical address: 51865 Value: 0  Virtual address: 20634 Physical address: 56986 Value: 20  Virtual address: 57555 Physical address: 38099 Value: 52  Virtual address: 61210 Physical address: 42266 Value: 59  Virtual address: 269 Physical address: 57101 Value: 0  Virtual address: 33154 Physical address: 53634 Value: 32  Virtual address: 64487 Physical address: 5095 Value: -7  Virtual address: 61223 Physical address: 42279 Value: -55  Virtual address: 47292 Physical address: 29884 Value: 0  Virtual address: 21852 Physical address: 24156 Value: 0  Virtual address: 5281 Physical address: 15265 Value: 0  Virtual address: 45912 Physical address: 51032 Value: 0  Virtual address: 32532 Physical address: 9492 Value: 0  Virtual address: 63067 Physical address: 22107 Value: -106  Virtual address: 41683 Physical address: 41939 Value: -76  Virtual address: 20981 Physical address: 39157 Value: 0  Virtual address: 33881 Physical address: 42073 Value: 0  Virtual address: 41785 Physical address: 38713 Value: 0  Virtual address: 4580 Physical address: 58852 Value: 0  Virtual address: 41389 Physical address: 25005 Value: 0  Virtual address: 28572 Physical address: 28060 Value: 0  Virtual address: 782 Physical address: 7950 Value: 0  Virtual address: 30273 Physical address: 58945 Value: 0  Virtual address: 62267 Physical address: 23867 Value: -50  Virtual address: 17922 Physical address: 18690 Value: 17  Virtual address: 63238 Physical address: 16902 Value: 61  Virtual address: 3308 Physical address: 40428 Value: 0  Virtual address: 26545 Physical address: 24497 Value: 0  Virtual address: 44395 Physical address: 44907 Value: 90  Virtual address: 39120 Physical address: 4048 Value: 0  Virtual address: 21706 Physical address: 52426 Value: 21  Virtual address: 7144 Physical address: 26600 Value: 0  Virtual address: 30244 Physical address: 58916 Value: 0  Virtual address: 3725 Physical address: 10125 Value: 0  Virtual address: 54632 Physical address: 48744 Value: 0  Virtual address: 30574 Physical address: 16238 Value: 29  Virtual address: 8473 Physical address: 19993 Value: 0  Virtual address: 12386 Physical address: 45154 Value: 12  Virtual address: 41114 Physical address: 8858 Value: 40  Virtual address: 57930 Physical address: 3146 Value: 56  Virtual address: 15341 Physical address: 32493 Value: 0  Virtual address: 15598 Physical address: 31982 Value: 15  Virtual address: 59922 Physical address: 10514 Value: 58  Virtual address: 18226 Physical address: 2354 Value: 17  Virtual address: 48162 Physical address: 17698 Value: 47  Virtual address: 41250 Physical address: 24866 Value: 40  Virtual address: 1512 Physical address: 51688 Value: 0  Virtual address: 2546 Physical address: 4850 Value: 2  Virtual address: 41682 Physical address: 41938 Value: 40  Virtual address: 322 Physical address: 57154 Value: 0  Virtual address: 880 Physical address: 8048 Value: 0  Virtual address: 20891 Physical address: 39067 Value: 102  Virtual address: 56604 Physical address: 13340 Value: 0  Virtual address: 40166 Physical address: 1254 Value: 39  Virtual address: 26791 Physical address: 42663 Value: 41  Virtual address: 44560 Physical address: 11024 Value: 0  Virtual address: 38698 Physical address: 46890 Value: 37  Virtual address: 64127 Physical address: 4479 Value: -97  Virtual address: 15028 Physical address: 24756 Value: 0  Virtual address: 38669 Physical address: 46861 Value: 0  Virtual address: 45637 Physical address: 7749 Value: 0  Virtual address: 43151 Physical address: 17551 Value: 35  Virtual address: 9465 Physical address: 23033 Value: 0  Virtual address: 2498 Physical address: 4802 Value: 2  Virtual address: 13978 Physical address: 31386 Value: 13  Virtual address: 16326 Physical address: 56006 Value: 15  Virtual address: 51442 Physical address: 32754 Value: 50  Virtual address: 34845 Physical address: 26653 Value: 0  Virtual address: 63667 Physical address: 28339 Value: 44  Virtual address: 39370 Physical address: 55754 Value: 38  Virtual address: 55671 Physical address: 60023 Value: 93  Virtual address: 64496 Physical address: 5104 Value: 0  Virtual address: 7767 Physical address: 57943 Value: -107  Virtual address: 6283 Physical address: 7563 Value: 34  Virtual address: 55884 Physical address: 34636 Value: 0  Virtual address: 61103 Physical address: 6063 Value: -85  Virtual address: 10184 Physical address: 60360 Value: 0  Virtual address: 39543 Physical address: 43383 Value: -99  Virtual address: 9555 Physical address: 59475 Value: 84  Virtual address: 13963 Physical address: 31371 Value: -94  Virtual address: 58975 Physical address: 14943 Value: -105  Virtual address: 19537 Physical address: 22609 Value: 0  Virtual address: 6101 Physical address: 9429 Value: 0  Virtual address: 41421 Physical address: 25037 Value: 0  Virtual address: 45502 Physical address: 46014 Value: 44  Virtual address: 29328 Physical address: 37008 Value: 0  Virtual address: 8149 Physical address: 34005 Value: 0  Virtual address: 25450 Physical address: 60522 Value: 24  Virtual address: 58944 Physical address: 14912 Value: 0  Virtual address: 50666 Physical address: 18666 Value: 49  Virtual address: 23084 Physical address: 35884 Value: 0  Virtual address: 36468 Physical address: 14452 Value: 0  Virtual address: 33645 Physical address: 60781 Value: 0  Virtual address: 25002 Physical address: 52650 Value: 24  Virtual address: 53715 Physical address: 979 Value: 116  Virtual address: 60173 Physical address: 57613 Value: 0  Virtual address: 46354 Physical address: 50194 Value: 45  Virtual address: 4708 Physical address: 27748 Value: 0  Virtual address: 28208 Physical address: 34864 Value: 0  Virtual address: 58844 Physical address: 55260 Value: 0  Virtual address: 22173 Physical address: 56733 Value: 0  Virtual address: 8535 Physical address: 20055 Value: 85  Virtual address: 42261 Physical address: 10773 Value: 0  Virtual address: 29687 Physical address: 49655 Value: -3  Virtual address: 37799 Physical address: 29351 Value: -23  Virtual address: 22566 Physical address: 2854 Value: 22  Virtual address: 62520 Physical address: 312 Value: 0  Virtual address: 4098 Physical address: 50690 Value: 4  Virtual address: 47999 Physical address: 25727 Value: -33  Virtual address: 49660 Physical address: 45564 Value: 0  Virtual address: 37063 Physical address: 18375 Value: 49  Virtual address: 41856 Physical address: 38784 Value: 0  Virtual address: 5417 Physical address: 21545 Value: 0  Virtual address: 48856 Physical address: 32984 Value: 0  Virtual address: 10682 Physical address: 27578 Value: 10  Virtual address: 22370 Physical address: 11362 Value: 21  Virtual address: 63281 Physical address: 16945 Value: 0  Virtual address: 62452 Physical address: 24052 Value: 0  Virtual address: 50532 Physical address: 18532 Value: 0  Virtual address: 9022 Physical address: 48190 Value: 8  Virtual address: 59300 Physical address: 10404 Value: 0  Virtual address: 58660 Physical address: 55076 Value: 0  Virtual address: 56401 Physical address: 51281 Value: 0  Virtual address: 8518 Physical address: 20038 Value: 8  Virtual address: 63066 Physical address: 22106 Value: 61  Virtual address: 63250 Physical address: 16914 Value: 61  Virtual address: 48592 Physical address: 2000 Value: 0  Virtual address: 28771 Physical address: 1379 Value: 24  Virtual address: 37673 Physical address: 29225 Value: 0  Virtual address: 60776 Physical address: 23656 Value: 0  Virtual address: 56438 Physical address: 51318 Value: 55  Virtual address: 60424 Physical address: 7176 Value: 0  Virtual address: 39993 Physical address: 1081 Value: 0  Virtual address: 56004 Physical address: 34756 Value: 0  Virtual address: 59002 Physical address: 14970 Value: 57  Virtual address: 33982 Physical address: 42174 Value: 33  Virtual address: 25498 Physical address: 60570 Value: 24  Virtual address: 57047 Physical address: 37591 Value: -75  Virtual address: 1401 Physical address: 51577 Value: 0  Virtual address: 15130 Physical address: 32282 Value: 14  Virtual address: 42960 Physical address: 19664 Value: 0  Virtual address: 61827 Physical address: 22403 Value: 96  Virtual address: 32442 Physical address: 7098 Value: 31  Virtual address: 64304 Physical address: 4912 Value: 0  Virtual address: 30273 Physical address: 58945 Value: 0  Virtual address: 38082 Physical address: 37314 Value: 37  Virtual address: 22404 Physical address: 11396 Value: 0  Virtual address: 3808 Physical address: 10208 Value: 0  Virtual address: 16883 Physical address: 48115 Value: 124  Virtual address: 23111 Physical address: 35911 Value: -111  Virtual address: 62417 Physical address: 24017 Value: 0  Virtual address: 60364 Physical address: 57804 Value: 0  Virtual address: 4542 Physical address: 58814 Value: 4  Virtual address: 14829 Physical address: 33517 Value: 0  Virtual address: 44964 Physical address: 13220 Value: 0  Virtual address: 33924 Physical address: 42116 Value: 0  Virtual address: 2141 Physical address: 35165 Value: 0  Virtual address: 19245 Physical address: 14125 Value: 0  Virtual address: 47168 Physical address: 29760 Value: 0  Virtual address: 24048 Physical address: 39664 Value: 0  Virtual address: 1022 Physical address: 8190 Value: 0  Virtual address: 23075 Physical address: 35875 Value: -120  Virtual address: 24888 Physical address: 52536 Value: 0  Virtual address: 49247 Physical address: 8543 Value: 23  Virtual address: 4900 Physical address: 13604 Value: 0  Virtual address: 22656 Physical address: 2944 Value: 0  Virtual address: 34117 Physical address: 60997 Value: 0  Virtual address: 55555 Physical address: 59907 Value: 64  Virtual address: 48947 Physical address: 50483 Value: -52  Virtual address: 59533 Physical address: 25997 Value: 0  Virtual address: 21312 Physical address: 9024 Value: 0  Virtual address: 21415 Physical address: 9127 Value: -23  Virtual address: 813 Physical address: 7981 Value: 0  Virtual address: 19419 Physical address: 14299 Value: -10  Virtual address: 1999 Physical address: 33231 Value: -13  Virtual address: 20155 Physical address: 40635 Value: -82  Virtual address: 21521 Physical address: 52241 Value: 0  Virtual address: 13670 Physical address: 53094 Value: 13  Virtual address: 19289 Physical address: 14169 Value: 0  Virtual address: 58483 Physical address: 15475 Value: 28  Virtual address: 41318 Physical address: 24934 Value: 40  Virtual address: 16151 Physical address: 55831 Value: -59  Virtual address: 13611 Physical address: 53035 Value: 74  Virtual address: 21514 Physical address: 52234 Value: 21  Virtual address: 13499 Physical address: 36283 Value: 46  Virtual address: 45583 Physical address: 7695 Value: -125  Virtual address: 49013 Physical address: 50549 Value: 0  Virtual address: 64843 Physical address: 2123 Value: 82  Virtual address: 63485 Physical address: 17149 Value: 0  Virtual address: 38697 Physical address: 46889 Value: 0  Virtual address: 59188 Physical address: 10292 Value: 0  Virtual address: 24593 Physical address: 38417 Value: 0  Virtual address: 57641 Physical address: 61225 Value: 0  Virtual address: 36524 Physical address: 14508 Value: 0  Virtual address: 56980 Physical address: 37524 Value: 0  Virtual address: 36810 Physical address: 35786 Value: 35  Virtual address: 6096 Physical address: 9424 Value: 0  Virtual address: 11070 Physical address: 39998 Value: 10  Virtual address: 60124 Physical address: 10716 Value: 0  Virtual address: 37576 Physical address: 21448 Value: 0  Virtual address: 15096 Physical address: 24824 Value: 0  Virtual address: 45247 Physical address: 49087 Value: 47  Virtual address: 32783 Physical address: 4111 Value: 3  Virtual address: 58390 Physical address: 15382 Value: 57  Virtual address: 60873 Physical address: 23753 Value: 0  Virtual address: 23719 Physical address: 54951 Value: 41  Virtual address: 24385 Physical address: 1601 Value: 0  Virtual address: 22307 Physical address: 11299 Value: -56  Virtual address: 17375 Physical address: 61663 Value: -9  Virtual address: 15990 Physical address: 21110 Value: 15  Virtual address: 20526 Physical address: 56878 Value: 20  Virtual address: 25904 Physical address: 36656 Value: 0  Virtual address: 42224 Physical address: 46320 Value: 0  Virtual address: 9311 Physical address: 22879 Value: 23  Virtual address: 7862 Physical address: 58038 Value: 7  Virtual address: 3835 Physical address: 10235 Value: -66  Virtual address: 30535 Physical address: 16199 Value: -47  Virtual address: 65179 Physical address: 48539 Value: -90  Virtual address: 57387 Physical address: 37931 Value: 10  Virtual address: 63579 Physical address: 28251 Value: 22  Virtual address: 4946 Physical address: 13650 Value: 4  Virtual address: 9037 Physical address: 48205 Value: 0  Virtual address: 61033 Physical address: 5993 Value: 0  Virtual address: 55543 Physical address: 58359 Value: 61  Virtual address: 50361 Physical address: 14009 Value: 0  Virtual address: 6480 Physical address: 29008 Value: 0  Virtual address: 14042 Physical address: 31450 Value: 13  Virtual address: 21531 Physical address: 52251 Value: 6  Virtual address: 39195 Physical address: 55579 Value: 70  Virtual address: 37511 Physical address: 21383 Value: -95  Virtual address: 23696 Physical address: 54928 Value: 0  Virtual address: 27440 Physical address: 15664 Value: 0  Virtual address: 28201 Physical address: 34857 Value: 0  Virtual address: 23072 Physical address: 35872 Value: 0  Virtual address: 7814 Physical address: 57990 Value: 7  Virtual address: 6552 Physical address: 29080 Value: 0  Virtual address: 43637 Physical address: 12661 Value: 0  Virtual address: 35113 Physical address: 39721 Value: 0  Virtual address: 34890 Physical address: 26698 Value: 34  Virtual address: 61297 Physical address: 42353 Value: 0  Virtual address: 45633 Physical address: 7745 Value: 0  Virtual address: 61431 Physical address: 42487 Value: -3  Virtual address: 46032 Physical address: 51152 Value: 0  Virtual address: 18774 Physical address: 61782 Value: 18  Virtual address: 62991 Physical address: 22031 Value: -125  Virtual address: 28059 Physical address: 3483 Value: 102  Virtual address: 35229 Physical address: 39837 Value: 0  Virtual address: 51230 Physical address: 32542 Value: 50  Virtual address: 14405 Physical address: 5701 Value: 0  Virtual address: 52242 Physical address: 46610 Value: 51  Virtual address: 43153 Physical address: 17553 Value: 0  Virtual address: 2709 Physical address: 53909 Value: 0  Virtual address: 47963 Physical address: 25691 Value: -42  Virtual address: 36943 Physical address: 18255 Value: 19  Virtual address: 54066 Physical address: 51762 Value: 52  Virtual address: 10054 Physical address: 60230 Value: 9  Virtual address: 43051 Physical address: 17451 Value: 10  Virtual address: 11525 Physical address: 41477 Value: 0  Virtual address: 17684 Physical address: 9748 Value: 0  Virtual address: 41681 Physical address: 41937 Value: 0  Virtual address: 27883 Physical address: 44267 Value: 58  Virtual address: 56909 Physical address: 37453 Value: 0  Virtual address: 45772 Physical address: 7884 Value: 0  Virtual address: 27496 Physical address: 15720 Value: 0  Virtual address: 46842 Physical address: 55546 Value: 45  Virtual address: 38734 Physical address: 46926 Value: 37  Virtual address: 28972 Physical address: 16428 Value: 0  Virtual address: 59684 Physical address: 47396 Value: 0  Virtual address: 11384 Physical address: 54392 Value: 0  Virtual address: 21018 Physical address: 37658 Value: 20  Virtual address: 2192 Physical address: 35216 Value: 0  Virtual address: 18384 Physical address: 2512 Value: 0  Virtual address: 13464 Physical address: 36248 Value: 0  Virtual address: 31018 Physical address: 61994 Value: 30  Virtual address: 62958 Physical address: 28654 Value: 61  Virtual address: 30611 Physical address: 16275 Value: -28  Virtual address: 1913 Physical address: 33145 Value: 0  Virtual address: 18904 Physical address: 61912 Value: 0  Virtual address: 26773 Physical address: 42645 Value: 0  Virtual address: 55491 Physical address: 58307 Value: 48  Virtual address: 21899 Physical address: 24203 Value: 98  Virtual address: 64413 Physical address: 5021 Value: 0  Virtual address: 47134 Physical address: 29726 Value: 46  Virtual address: 23172 Physical address: 35972 Value: 0  Virtual address: 7262 Physical address: 43102 Value: 7  Virtual address: 12705 Physical address: 31137 Value: 0  Virtual address: 7522 Physical address: 6242 Value: 7  Virtual address: 58815 Physical address: 55231 Value: 111  Virtual address: 34916 Physical address: 26724 Value: 0  Virtual address: 3802 Physical address: 10202 Value: 3  Virtual address: 58008 Physical address: 3224 Value: 0  Virtual address: 1239 Physical address: 40919 Value: 53  Virtual address: 63947 Physical address: 21963 Value: 114  Virtual address: 381 Physical address: 57213 Value: 0  Virtual address: 60734 Physical address: 23614 Value: 59  Virtual address: 48769 Physical address: 32897 Value: 0  Virtual address: 41938 Physical address: 38866 Value: 40  Virtual address: 38025 Physical address: 37257 Value: 0  Virtual address: 55099 Physical address: 5179 Value: -50  Virtual address: 56691 Physical address: 13427 Value: 92  Virtual address: 39530 Physical address: 43370 Value: 38  Virtual address: 59003 Physical address: 14971 Value: -98  Virtual address: 6029 Physical address: 9357 Value: 0  Virtual address: 20920 Physical address: 39096 Value: 0  Virtual address: 8077 Physical address: 33933 Value: 0  Virtual address: 42633 Physical address: 20873 Value: 0  Virtual address: 17443 Physical address: 40995 Value: 8  Virtual address: 53570 Physical address: 834 Value: 52  Virtual address: 22833 Physical address: 52785 Value: 0  Virtual address: 3782 Physical address: 10182 Value: 3  Virtual address: 47758 Physical address: 56462 Value: 46  Virtual address: 22136 Physical address: 56696 Value: 0  Virtual address: 22427 Physical address: 11419 Value: -26  Virtual address: 23867 Physical address: 39483 Value: 78  Virtual address: 59968 Physical address: 10560 Value: 0  Virtual address: 62166 Physical address: 62422 Value: 60  Virtual address: 6972 Physical address: 26428 Value: 0  Virtual address: 63684 Physical address: 28356 Value: 0  Virtual address: 46388 Physical address: 50228 Value: 0  Virtual address: 41942 Physical address: 38870 Value: 40  Virtual address: 36524 Physical address: 14508 Value: 0  Virtual address: 9323 Physical address: 22891 Value: 26  Virtual address: 31114 Physical address: 62090 Value: 30  Virtual address: 22345 Physical address: 11337 Value: 0  Virtual address: 46463 Physical address: 50303 Value: 95  Virtual address: 54671 Physical address: 48783 Value: 99  Virtual address: 9214 Physical address: 48382 Value: 8  Virtual address: 7257 Physical address: 43097 Value: 0  Virtual address: 33150 Physical address: 53630 Value: 32  Virtual address: 41565 Physical address: 41821 Value: 0  Virtual address: 26214 Physical address: 49254 Value: 25  Virtual address: 3595 Physical address: 9995 Value: -126  Virtual address: 17932 Physical address: 18700 Value: 0  Virtual address: 34660 Physical address: 18020 Value: 0  Virtual address: 51961 Physical address: 27385 Value: 0  Virtual address: 58634 Physical address: 55050 Value: 57  Virtual address: 57990 Physical address: 3206 Value: 56  Virtual address: 28848 Physical address: 1456 Value: 0  Virtual address: 49920 Physical address: 59136 Value: 0  Virtual address: 18351 Physical address: 2479 Value: -21  Virtual address: 53669 Physical address: 933 Value: 0  Virtual address: 33996 Physical address: 42188 Value: 0  Virtual address: 6741 Physical address: 6741 Value: 0  Virtual address: 64098 Physical address: 4450 Value: 62  Virtual address: 606 Physical address: 17246 Value: 0  Virtual address: 27383 Physical address: 28919 Value: -67  Virtual address: 63140 Physical address: 22180 Value: 0  Virtual address: 32228 Physical address: 49892 Value: 0  Virtual address: 63437 Physical address: 17101 Value: 0  Virtual address: 29085 Physical address: 16541 Value: 0  Virtual address: 65080 Physical address: 48440 Value: 0  Virtual address: 38753 Physical address: 46945 Value: 0  Virtual address: 16041 Physical address: 21161 Value: 0  Virtual address: 9041 Physical address: 48209 Value: 0  Virtual address: 42090 Physical address: 46186 Value: 41  Virtual address: 46388 Physical address: 50228 Value: 0  Virtual address: 63650 Physical address: 28322 Value: 62  Virtual address: 36636 Physical address: 35612 Value: 0  Virtual address: 21947 Physical address: 24251 Value: 110  Virtual address: 19833 Physical address: 36473 Value: 0  Virtual address: 36464 Physical address: 14448 Value: 0  Virtual address: 8541 Physical address: 20061 Value: 0  Virtual address: 12712 Physical address: 31144 Value: 0  Virtual address: 48955 Physical address: 50491 Value: -50  Virtual address: 39206 Physical address: 55590 Value: 38  Virtual address: 15578 Physical address: 31962 Value: 15  Virtual address: 49205 Physical address: 8501 Value: 0  Virtual address: 7731 Physical address: 57907 Value: -116  Virtual address: 43046 Physical address: 17446 Value: 42  Virtual address: 60498 Physical address: 7250 Value: 59  Virtual address: 9237 Physical address: 22805 Value: 0  Virtual address: 47706 Physical address: 56410 Value: 46  Virtual address: 43973 Physical address: 57541 Value: 0  Virtual address: 42008 Physical address: 46104 Value: 0  Virtual address: 27460 Physical address: 15684 Value: 0  Virtual address: 24999 Physical address: 52647 Value: 105  Virtual address: 51933 Physical address: 27357 Value: 0  Virtual address: 34070 Physical address: 60950 Value: 33  Virtual address: 65155 Physical address: 48515 Value: -96  Virtual address: 59955 Physical address: 10547 Value: -116  Virtual address: 9277 Physical address: 22845 Value: 0  Virtual address: 20420 Physical address: 16836 Value: 0  Virtual address: 44860 Physical address: 13116 Value: 0  Virtual address: 50992 Physical address: 42800 Value: 0  Virtual address: 10583 Physical address: 27479 Value: 85  Virtual address: 57751 Physical address: 61335 Value: 101  Virtual address: 23195 Physical address: 35995 Value: -90  Virtual address: 27227 Physical address: 28763 Value: -106  Virtual address: 42816 Physical address: 19520 Value: 0  Virtual address: 58219 Physical address: 34155 Value: -38  Virtual address: 37606 Physical address: 21478 Value: 36  Virtual address: 18426 Physical address: 2554 Value: 17  Virtual address: 21238 Physical address: 37878 Value: 20  Virtual address: 11983 Physical address: 59855 Value: -77  Virtual address: 48394 Physical address: 1802 Value: 47  Virtual address: 11036 Physical address: 39964 Value: 0  Virtual address: 30557 Physical address: 16221 Value: 0  Virtual address: 23453 Physical address: 20637 Value: 0  Virtual address: 49847 Physical address: 31671 Value: -83  Virtual address: 30032 Physical address: 592 Value: 0  Virtual address: 48065 Physical address: 25793 Value: 0  Virtual address: 6957 Physical address: 26413 Value: 0  Virtual address: 2301 Physical address: 35325 Value: 0  Virtual address: 7736 Physical address: 57912 Value: 0  Virtual address: 31260 Physical address: 23324 Value: 0  Virtual address: 17071 Physical address: 175 Value: -85  Virtual address: 8940 Physical address: 46572 Value: 0  Virtual address: 9929 Physical address: 44745 Value: 0  Virtual address: 45563 Physical address: 46075 Value: 126  Virtual address: 12107 Physical address: 2635 Value: -46 | Virtual address: 16916 Physical address: 20 Value: 0  Virtual address: 62493 Physical address: 285 Value: 0  Virtual address: 30198 Physical address: 758 Value: 29  Virtual address: 53683 Physical address: 947 Value: 108  Virtual address: 40185 Physical address: 1273 Value: 0  Virtual address: 28781 Physical address: 1389 Value: 0  Virtual address: 24462 Physical address: 1678 Value: 23  Virtual address: 48399 Physical address: 1807 Value: 67  Virtual address: 64815 Physical address: 2095 Value: 75  Virtual address: 18295 Physical address: 2423 Value: -35  Virtual address: 12218 Physical address: 2746 Value: 11  Virtual address: 22760 Physical address: 3048 Value: 0  Virtual address: 57982 Physical address: 3198 Value: 56  Virtual address: 27966 Physical address: 3390 Value: 27  Virtual address: 54894 Physical address: 3694 Value: 53  Virtual address: 38929 Physical address: 3857 Value: 0  Virtual address: 32865 Physical address: 4193 Value: 0  Virtual address: 64243 Physical address: 4595 Value: -68  Virtual address: 2315 Physical address: 4619 Value: 66  Virtual address: 64454 Physical address: 5062 Value: 62  Virtual address: 55041 Physical address: 5121 Value: 0  Virtual address: 18633 Physical address: 5577 Value: 0  Virtual address: 14557 Physical address: 5853 Value: 0  Virtual address: 61006 Physical address: 5966 Value: 59  Virtual address: 62615 Physical address: 407 Value: 37  Virtual address: 7591 Physical address: 6311 Value: 105  Virtual address: 64747 Physical address: 6635 Value: 58  Virtual address: 6727 Physical address: 6727 Value: -111  Virtual address: 32315 Physical address: 6971 Value: -114  Virtual address: 60645 Physical address: 7397 Value: 0  Virtual address: 6308 Physical address: 7588 Value: 0  Virtual address: 45688 Physical address: 7800 Value: 0  Virtual address: 969 Physical address: 8137 Value: 0  Virtual address: 40891 Physical address: 8379 Value: -18  Virtual address: 49294 Physical address: 8590 Value: 48  Virtual address: 41118 Physical address: 8862 Value: 40  Virtual address: 21395 Physical address: 9107 Value: -28  Virtual address: 6091 Physical address: 9419 Value: -14  Virtual address: 32541 Physical address: 9501 Value: 0  Virtual address: 17665 Physical address: 9729 Value: 0  Virtual address: 3784 Physical address: 10184 Value: 0  Virtual address: 28718 Physical address: 1326 Value: 28  Virtual address: 59240 Physical address: 10344 Value: 0  Virtual address: 40178 Physical address: 1266 Value: 39  Virtual address: 60086 Physical address: 10678 Value: 58  Virtual address: 42252 Physical address: 10764 Value: 0  Virtual address: 44770 Physical address: 11234 Value: 43  Virtual address: 22514 Physical address: 11506 Value: 21  Virtual address: 3067 Physical address: 11771 Value: -2  Virtual address: 15757 Physical address: 11917 Value: 0  Virtual address: 31649 Physical address: 12193 Value: 0  Virtual address: 10842 Physical address: 12378 Value: 10  Virtual address: 43765 Physical address: 12789 Value: 0  Virtual address: 33405 Physical address: 12925 Value: 0  Virtual address: 44954 Physical address: 13210 Value: 43  Virtual address: 56657 Physical address: 13393 Value: 0  Virtual address: 5003 Physical address: 13707 Value: -30  Virtual address: 50227 Physical address: 13875 Value: 12  Virtual address: 19358 Physical address: 14238 Value: 18  Virtual address: 36529 Physical address: 14513 Value: 0  Virtual address: 10392 Physical address: 14744 Value: 0  Virtual address: 58882 Physical address: 14850 Value: 57  Virtual address: 5129 Physical address: 15113 Value: 0  Virtual address: 58554 Physical address: 15546 Value: 57  Virtual address: 58584 Physical address: 15576 Value: 0  Virtual address: 27444 Physical address: 15668 Value: 0  Virtual address: 58982 Physical address: 14950 Value: 57  Virtual address: 51476 Physical address: 15892 Value: 0  Virtual address: 6796 Physical address: 6796 Value: 0  Virtual address: 21311 Physical address: 9023 Value: -49  Virtual address: 30705 Physical address: 16369 Value: 0  Virtual address: 28964 Physical address: 16420 Value: 0  Virtual address: 41003 Physical address: 8747 Value: 10  Virtual address: 20259 Physical address: 16675 Value: -56  Virtual address: 57857 Physical address: 3073 Value: 0  Virtual address: 63258 Physical address: 16922 Value: 61  Virtual address: 36374 Physical address: 14358 Value: 35  Virtual address: 692 Physical address: 17332 Value: 0  Virtual address: 43121 Physical address: 17521 Value: 0  Virtual address: 48128 Physical address: 17664 Value: 0  Virtual address: 34561 Physical address: 17921 Value: 0  Virtual address: 49213 Physical address: 8509 Value: 0  Virtual address: 36922 Physical address: 18234 Value: 36  Virtual address: 59162 Physical address: 10266 Value: 57  Virtual address: 50552 Physical address: 18552 Value: 0  Virtual address: 17866 Physical address: 9930 Value: 17  Virtual address: 18145 Physical address: 18913 Value: 0  Virtual address: 3884 Physical address: 18988 Value: 0  Virtual address: 54388 Physical address: 19316 Value: 0  Virtual address: 42932 Physical address: 19636 Value: 0  Virtual address: 46919 Physical address: 19783 Value: -47  Virtual address: 58892 Physical address: 14860 Value: 0  Virtual address: 8620 Physical address: 20140 Value: 0  Virtual address: 38336 Physical address: 20416 Value: 0  Virtual address: 64357 Physical address: 4965 Value: 0  Virtual address: 23387 Physical address: 20571 Value: -42  Virtual address: 42632 Physical address: 20872 Value: 0  Virtual address: 15913 Physical address: 21033 Value: 0  Virtual address: 15679 Physical address: 11839 Value: 79  Virtual address: 22501 Physical address: 11493 Value: 0  Virtual address: 37540 Physical address: 21412 Value: 0  Virtual address: 5527 Physical address: 21655 Value: 101  Virtual address: 63921 Physical address: 21937 Value: 0  Virtual address: 62716 Physical address: 508 Value: 0  Virtual address: 32874 Physical address: 4202 Value: 32  Virtual address: 64390 Physical address: 4998 Value: 62  Virtual address: 63101 Physical address: 22141 Value: 0  Virtual address: 61802 Physical address: 22378 Value: 60  Virtual address: 19648 Physical address: 22720 Value: 0  Virtual address: 29031 Physical address: 16487 Value: 89  Virtual address: 44981 Physical address: 13237 Value: 0  Virtual address: 28092 Physical address: 3516 Value: 0  Virtual address: 9448 Physical address: 23016 Value: 0  Virtual address: 44744 Physical address: 11208 Value: 0  Virtual address: 61496 Physical address: 23096 Value: 0  Virtual address: 31453 Physical address: 23517 Value: 0  Virtual address: 60746 Physical address: 23626 Value: 59  Virtual address: 12199 Physical address: 2727 Value: -23  Virtual address: 62255 Physical address: 23855 Value: -53  Virtual address: 21793 Physical address: 24097 Value: 0  Virtual address: 26544 Physical address: 24496 Value: 0  Virtual address: 14964 Physical address: 24692 Value: 0  Virtual address: 41462 Physical address: 25078 Value: 40  Virtual address: 56089 Physical address: 25113 Value: 0  Virtual address: 52038 Physical address: 25414 Value: 50  Virtual address: 47982 Physical address: 25710 Value: 46  Virtual address: 59484 Physical address: 25948 Value: 0  Virtual address: 50924 Physical address: 26348 Value: 0  Virtual address: 6942 Physical address: 26398 Value: 6  Virtual address: 34998 Physical address: 26806 Value: 34  Virtual address: 27069 Physical address: 27069 Value: 0  Virtual address: 51926 Physical address: 27350 Value: 50  Virtual address: 60645 Physical address: 7397 Value: 0  Virtual address: 43181 Physical address: 17581 Value: 0  Virtual address: 10559 Physical address: 27455 Value: 79  Virtual address: 4664 Physical address: 27704 Value: 0  Virtual address: 28578 Physical address: 28066 Value: 27  Virtual address: 59516 Physical address: 25980 Value: 0  Virtual address: 38912 Physical address: 3840 Value: 0  Virtual address: 63562 Physical address: 28234 Value: 62  Virtual address: 64846 Physical address: 2126 Value: 63  Virtual address: 62938 Physical address: 28634 Value: 61  Virtual address: 27194 Physical address: 28730 Value: 26  Virtual address: 28804 Physical address: 1412 Value: 0  Virtual address: 61703 Physical address: 22279 Value: 65  Virtual address: 10998 Physical address: 12534 Value: 10  Virtual address: 6596 Physical address: 29124 Value: 0  Virtual address: 37721 Physical address: 29273 Value: 0  Virtual address: 43430 Physical address: 29606 Value: 42  Virtual address: 22692 Physical address: 2980 Value: 0  Virtual address: 62971 Physical address: 28667 Value: 126  Virtual address: 47125 Physical address: 29717 Value: 0  Virtual address: 52521 Physical address: 29993 Value: 0  Virtual address: 34646 Physical address: 18006 Value: 33  Virtual address: 32889 Physical address: 4217 Value: 0  Virtual address: 13055 Physical address: 30463 Value: -65  Virtual address: 65416 Physical address: 30600 Value: 0  Virtual address: 62869 Physical address: 28565 Value: 0  Virtual address: 57314 Physical address: 30946 Value: 55  Virtual address: 12659 Physical address: 31091 Value: 92  Virtual address: 14052 Physical address: 31460 Value: 0  Virtual address: 32956 Physical address: 4284 Value: 0  Virtual address: 49273 Physical address: 8569 Value: 0  Virtual address: 50352 Physical address: 14000 Value: 0  Virtual address: 49737 Physical address: 31561 Value: 0  Virtual address: 15555 Physical address: 31939 Value: 48  Virtual address: 47475 Physical address: 32115 Value: 92  Virtual address: 15328 Physical address: 32480 Value: 0  Virtual address: 34621 Physical address: 17981 Value: 0  Virtual address: 51365 Physical address: 32677 Value: 0  Virtual address: 32820 Physical address: 4148 Value: 0  Virtual address: 48855 Physical address: 32983 Value: -75  Virtual address: 12224 Physical address: 2752 Value: 0  Virtual address: 2035 Physical address: 33267 Value: -4  Virtual address: 60539 Physical address: 7291 Value: 30  Virtual address: 14595 Physical address: 33283 Value: 64  Virtual address: 13853 Physical address: 31261 Value: 0  Virtual address: 24143 Physical address: 33615 Value: -109  Virtual address: 15216 Physical address: 32368 Value: 0  Virtual address: 8113 Physical address: 33969 Value: 0  Virtual address: 22640 Physical address: 2928 Value: 0  Virtual address: 32978 Physical address: 4306 Value: 32  Virtual address: 39151 Physical address: 4079 Value: 59  Virtual address: 19520 Physical address: 22592 Value: 0  Virtual address: 58141 Physical address: 34077 Value: 0  Virtual address: 63959 Physical address: 21975 Value: 117  Virtual address: 53040 Physical address: 34352 Value: 0  Virtual address: 55842 Physical address: 34594 Value: 54  Virtual address: 585 Physical address: 17225 Value: 0  Virtual address: 51229 Physical address: 32541 Value: 0  Virtual address: 64181 Physical address: 4533 Value: 0  Virtual address: 54879 Physical address: 3679 Value: -105  Virtual address: 28210 Physical address: 34866 Value: 27  Virtual address: 10268 Physical address: 14620 Value: 0  Virtual address: 15395 Physical address: 31779 Value: 8  Virtual address: 12884 Physical address: 30292 Value: 0  Virtual address: 2149 Physical address: 35173 Value: 0  Virtual address: 53483 Physical address: 35563 Value: 58  Virtual address: 59606 Physical address: 26070 Value: 58  Virtual address: 14981 Physical address: 24709 Value: 0  Virtual address: 36672 Physical address: 35648 Value: 0  Virtual address: 23197 Physical address: 35997 Value: 0  Virtual address: 36518 Physical address: 14502 Value: 35  Virtual address: 13361 Physical address: 36145 Value: 0  Virtual address: 19810 Physical address: 36450 Value: 19  Virtual address: 25955 Physical address: 36707 Value: 88  Virtual address: 62678 Physical address: 470 Value: 61  Virtual address: 26021 Physical address: 36773 Value: 0  Virtual address: 29409 Physical address: 37089 Value: 0  Virtual address: 38111 Physical address: 37343 Value: 55  Virtual address: 58573 Physical address: 15565 Value: 0  Virtual address: 56840 Physical address: 37384 Value: 0  Virtual address: 41306 Physical address: 24922 Value: 40  Virtual address: 54426 Physical address: 19354 Value: 53  Virtual address: 3617 Physical address: 10017 Value: 0  Virtual address: 50652 Physical address: 18652 Value: 0  Virtual address: 41452 Physical address: 25068 Value: 0  Virtual address: 20241 Physical address: 16657 Value: 0  Virtual address: 31723 Physical address: 12267 Value: -6  Virtual address: 53747 Physical address: 1011 Value: 124  Virtual address: 28550 Physical address: 28038 Value: 27  Virtual address: 23402 Physical address: 20586 Value: 22  Virtual address: 21205 Physical address: 37845 Value: 0  Virtual address: 56181 Physical address: 25205 Value: 0  Virtual address: 57470 Physical address: 38014 Value: 56  Virtual address: 39933 Physical address: 38397 Value: 0  Virtual address: 34964 Physical address: 26772 Value: 0  Virtual address: 24781 Physical address: 38605 Value: 0  Virtual address: 41747 Physical address: 38675 Value: -60  Virtual address: 62564 Physical address: 356 Value: 0  Virtual address: 58461 Physical address: 15453 Value: 0  Virtual address: 20858 Physical address: 39034 Value: 20  Virtual address: 49301 Physical address: 8597 Value: 0  Virtual address: 40572 Physical address: 39292 Value: 0  Virtual address: 23840 Physical address: 39456 Value: 0  Virtual address: 35278 Physical address: 39886 Value: 34  Virtual address: 62905 Physical address: 28601 Value: 0  Virtual address: 56650 Physical address: 13386 Value: 55  Virtual address: 11149 Physical address: 40077 Value: 0  Virtual address: 38920 Physical address: 3848 Value: 0  Virtual address: 23430 Physical address: 20614 Value: 22  Virtual address: 57592 Physical address: 38136 Value: 0  Virtual address: 3080 Physical address: 40200 Value: 0  Virtual address: 6677 Physical address: 6677 Value: 0  Virtual address: 50704 Physical address: 26128 Value: 0  Virtual address: 51883 Physical address: 27307 Value: -86  Virtual address: 62799 Physical address: 28495 Value: 83  Virtual address: 20188 Physical address: 40668 Value: 0  Virtual address: 1245 Physical address: 40925 Value: 0  Virtual address: 12220 Physical address: 2748 Value: 0  Virtual address: 17602 Physical address: 41154 Value: 17  Virtual address: 28609 Physical address: 28097 Value: 0  Virtual address: 42694 Physical address: 20934 Value: 41  Virtual address: 29826 Physical address: 41346 Value: 29  Virtual address: 13827 Physical address: 31235 Value: -128  Virtual address: 27336 Physical address: 28872 Value: 0  Virtual address: 53343 Physical address: 35423 Value: 23  Virtual address: 11533 Physical address: 41485 Value: 0  Virtual address: 41713 Physical address: 41969 Value: 0  Virtual address: 33890 Physical address: 42082 Value: 33  Virtual address: 4894 Physical address: 13598 Value: 4  Virtual address: 57599 Physical address: 38143 Value: 63  Virtual address: 3870 Physical address: 18974 Value: 3  Virtual address: 58622 Physical address: 15614 Value: 57  Virtual address: 29780 Physical address: 41300 Value: 0  Virtual address: 62553 Physical address: 345 Value: 0  Virtual address: 2303 Physical address: 35327 Value: 63  Virtual address: 51915 Physical address: 27339 Value: -78  Virtual address: 6251 Physical address: 7531 Value: 26  Virtual address: 38107 Physical address: 37339 Value: 54  Virtual address: 59325 Physical address: 10429 Value: 0  Virtual address: 61295 Physical address: 42351 Value: -37  Virtual address: 26699 Physical address: 42571 Value: 18  Virtual address: 51188 Physical address: 42996 Value: 0  Virtual address: 59519 Physical address: 25983 Value: 31  Virtual address: 7345 Physical address: 43185 Value: 0  Virtual address: 20325 Physical address: 16741 Value: 0  Virtual address: 39633 Physical address: 43473 Value: 0  Virtual address: 1562 Physical address: 43546 Value: 1  Virtual address: 7580 Physical address: 6300 Value: 0  Virtual address: 8170 Physical address: 34026 Value: 7  Virtual address: 62256 Physical address: 23856 Value: 0  Virtual address: 35823 Physical address: 44015 Value: -5  Virtual address: 27790 Physical address: 44174 Value: 27  Virtual address: 13191 Physical address: 44423 Value: -31  Virtual address: 9772 Physical address: 44588 Value: 0  Virtual address: 7477 Physical address: 6197 Value: 0  Virtual address: 44455 Physical address: 44967 Value: 105  Virtual address: 59546 Physical address: 26010 Value: 58  Virtual address: 49347 Physical address: 8643 Value: 48  Virtual address: 36539 Physical address: 14523 Value: -82  Virtual address: 12453 Physical address: 45221 Value: 0  Virtual address: 49640 Physical address: 45544 Value: 0  Virtual address: 28290 Physical address: 34946 Value: 27  Virtual address: 44817 Physical address: 13073 Value: 0  Virtual address: 8565 Physical address: 20085 Value: 0  Virtual address: 16399 Physical address: 45583 Value: 3  Virtual address: 41934 Physical address: 38862 Value: 40  Virtual address: 45457 Physical address: 45969 Value: 0  Virtual address: 33856 Physical address: 42048 Value: 0  Virtual address: 19498 Physical address: 22570 Value: 19  Virtual address: 17661 Physical address: 41213 Value: 0  Virtual address: 63829 Physical address: 21845 Value: 0  Virtual address: 42034 Physical address: 46130 Value: 41  Virtual address: 28928 Physical address: 16384 Value: 0  Virtual address: 30711 Physical address: 16375 Value: -3  Virtual address: 8800 Physical address: 46432 Value: 0  Virtual address: 52335 Physical address: 46703 Value: 27  Virtual address: 38775 Physical address: 46967 Value: -35  Virtual address: 52704 Physical address: 30176 Value: 0  Virtual address: 24380 Physical address: 1596 Value: 0  Virtual address: 19602 Physical address: 22674 Value: 19  Virtual address: 57998 Physical address: 3214 Value: 56  Virtual address: 2919 Physical address: 11623 Value: -39  Virtual address: 8362 Physical address: 47274 Value: 8  Virtual address: 17884 Physical address: 9948 Value: 0  Virtual address: 45737 Physical address: 7849 Value: 0  Virtual address: 47894 Physical address: 25622 Value: 46  Virtual address: 59667 Physical address: 47379 Value: 68  Virtual address: 10385 Physical address: 14737 Value: 0  Virtual address: 52782 Physical address: 47662 Value: 51  Virtual address: 64416 Physical address: 5024 Value: 0  Virtual address: 40946 Physical address: 8434 Value: 39  Virtual address: 16778 Physical address: 48010 Value: 16  Virtual address: 27159 Physical address: 28695 Value: -123  Virtual address: 24324 Physical address: 1540 Value: 0  Virtual address: 32450 Physical address: 7106 Value: 31  Virtual address: 9108 Physical address: 48276 Value: 0  Virtual address: 65305 Physical address: 30489 Value: 0  Virtual address: 19575 Physical address: 22647 Value: 29  Virtual address: 11117 Physical address: 40045 Value: 0  Virtual address: 65170 Physical address: 48530 Value: 63  Virtual address: 58013 Physical address: 3229 Value: 0  Virtual address: 61676 Physical address: 23276 Value: 0  Virtual address: 63510 Physical address: 28182 Value: 62  Virtual address: 17458 Physical address: 41010 Value: 17  Virtual address: 54675 Physical address: 48787 Value: 100  Virtual address: 1713 Physical address: 43697 Value: 0  Virtual address: 55105 Physical address: 5185 Value: 0  Virtual address: 65321 Physical address: 30505 Value: 0  Virtual address: 45278 Physical address: 49118 Value: 44  Virtual address: 26256 Physical address: 49296 Value: 0  Virtual address: 64198 Physical address: 4550 Value: 62  Virtual address: 29441 Physical address: 49409 Value: 0  Virtual address: 1928 Physical address: 33160 Value: 0  Virtual address: 39425 Physical address: 43265 Value: 0  Virtual address: 32000 Physical address: 49664 Value: 0  Virtual address: 28549 Physical address: 28037 Value: 0  Virtual address: 46295 Physical address: 50135 Value: 53  Virtual address: 22772 Physical address: 3060 Value: 0  Virtual address: 58228 Physical address: 34164 Value: 0  Virtual address: 63525 Physical address: 28197 Value: 0  Virtual address: 32602 Physical address: 9562 Value: 31  Virtual address: 46195 Physical address: 50035 Value: 28  Virtual address: 55849 Physical address: 34601 Value: 0  Virtual address: 46454 Physical address: 50294 Value: 45  Virtual address: 7487 Physical address: 6207 Value: 79  Virtual address: 33879 Physical address: 42071 Value: 21  Virtual address: 42004 Physical address: 46100 Value: 0  Virtual address: 8599 Physical address: 20119 Value: 101  Virtual address: 18641 Physical address: 5585 Value: 0  Virtual address: 49015 Physical address: 50551 Value: -35  Virtual address: 26830 Physical address: 42702 Value: 26  Virtual address: 34754 Physical address: 18114 Value: 33  Virtual address: 14668 Physical address: 33356 Value: 0  Virtual address: 38362 Physical address: 20442 Value: 37  Virtual address: 38791 Physical address: 46983 Value: -31  Virtual address: 4171 Physical address: 50763 Value: 18  Virtual address: 45975 Physical address: 51095 Value: -27  Virtual address: 14623 Physical address: 33311 Value: 71  Virtual address: 62393 Physical address: 23993 Value: 0  Virtual address: 64658 Physical address: 6546 Value: 63  Virtual address: 10963 Physical address: 12499 Value: -76  Virtual address: 9058 Physical address: 48226 Value: 8  Virtual address: 51031 Physical address: 42839 Value: -43  Virtual address: 32425 Physical address: 7081 Value: 0  Virtual address: 45483 Physical address: 45995 Value: 106  Virtual address: 44611 Physical address: 11075 Value: -112  Virtual address: 63664 Physical address: 28336 Value: 0  Virtual address: 54920 Physical address: 3720 Value: 0  Virtual address: 7663 Physical address: 6383 Value: 123  Virtual address: 56480 Physical address: 51360 Value: 0  Virtual address: 1489 Physical address: 51665 Value: 0  Virtual address: 28438 Physical address: 27926 Value: 27  Virtual address: 65449 Physical address: 30633 Value: 0  Virtual address: 12441 Physical address: 45209 Value: 0  Virtual address: 58530 Physical address: 15522 Value: 57  Virtual address: 63570 Physical address: 28242 Value: 62  Virtual address: 26251 Physical address: 49291 Value: -94  Virtual address: 15972 Physical address: 21092 Value: 0  Virtual address: 35826 Physical address: 44018 Value: 34  Virtual address: 5491 Physical address: 21619 Value: 92  Virtual address: 54253 Physical address: 51949 Value: 0  Virtual address: 49655 Physical address: 45559 Value: 125  Virtual address: 5868 Physical address: 52204 Value: 0  Virtual address: 20163 Physical address: 40643 Value: -80  Virtual address: 51079 Physical address: 42887 Value: -31  Virtual address: 21398 Physical address: 9110 Value: 20  Virtual address: 32756 Physical address: 9716 Value: 0  Virtual address: 64196 Physical address: 4548 Value: 0  Virtual address: 43218 Physical address: 17618 Value: 42  Virtual address: 21583 Physical address: 52303 Value: 19  Virtual address: 25086 Physical address: 52734 Value: 24  Virtual address: 45515 Physical address: 46027 Value: 114  Virtual address: 12893 Physical address: 30301 Value: 0  Virtual address: 22914 Physical address: 52866 Value: 22  Virtual address: 58969 Physical address: 14937 Value: 0  Virtual address: 20094 Physical address: 40574 Value: 19  Virtual address: 13730 Physical address: 53154 Value: 13  Virtual address: 44059 Physical address: 53275 Value: 6  Virtual address: 28931 Physical address: 16387 Value: 64  Virtual address: 13533 Physical address: 36317 Value: 0  Virtual address: 33134 Physical address: 53614 Value: 32  Virtual address: 28483 Physical address: 27971 Value: -48  Virtual address: 1220 Physical address: 40900 Value: 0  Virtual address: 38174 Physical address: 20254 Value: 37  Virtual address: 53502 Physical address: 35582 Value: 52  Virtual address: 43328 Physical address: 29504 Value: 0  Virtual address: 4970 Physical address: 13674 Value: 4  Virtual address: 8090 Physical address: 33946 Value: 7  Virtual address: 2661 Physical address: 53861 Value: 0  Virtual address: 53903 Physical address: 54159 Value: -93  Virtual address: 11025 Physical address: 39953 Value: 0  Virtual address: 26627 Physical address: 42499 Value: 0  Virtual address: 18117 Physical address: 18885 Value: 0  Virtual address: 14505 Physical address: 5801 Value: 0  Virtual address: 61528 Physical address: 23128 Value: 0  Virtual address: 20423 Physical address: 16839 Value: -15  Virtual address: 26962 Physical address: 26962 Value: 26  Virtual address: 36392 Physical address: 14376 Value: 0  Virtual address: 11365 Physical address: 54373 Value: 0  Virtual address: 50882 Physical address: 26306 Value: 49  Virtual address: 41668 Physical address: 41924 Value: 0  Virtual address: 30497 Physical address: 16161 Value: 0  Virtual address: 36216 Physical address: 54648 Value: 0  Virtual address: 5619 Physical address: 21747 Value: 124  Virtual address: 36983 Physical address: 18295 Value: 29  Virtual address: 59557 Physical address: 26021 Value: 0  Virtual address: 36663 Physical address: 35639 Value: -51  Virtual address: 36436 Physical address: 14420 Value: 0  Virtual address: 37057 Physical address: 18369 Value: 0  Virtual address: 23585 Physical address: 54817 Value: 0  Virtual address: 58791 Physical address: 55207 Value: 105  Virtual address: 46666 Physical address: 55370 Value: 45  Virtual address: 64475 Physical address: 5083 Value: -10  Virtual address: 21615 Physical address: 52335 Value: 27  Virtual address: 41090 Physical address: 8834 Value: 40  Virtual address: 1771 Physical address: 43755 Value: -70  Virtual address: 47513 Physical address: 32153 Value: 0  Virtual address: 39338 Physical address: 55722 Value: 38  Virtual address: 1390 Physical address: 51566 Value: 1  Virtual address: 38772 Physical address: 46964 Value: 0  Virtual address: 58149 Physical address: 34085 Value: 0  Virtual address: 7196 Physical address: 43036 Value: 0  Virtual address: 9123 Physical address: 48291 Value: -24  Virtual address: 7491 Physical address: 6211 Value: 80  Virtual address: 62616 Physical address: 408 Value: 0  Virtual address: 15436 Physical address: 31820 Value: 0  Virtual address: 17491 Physical address: 41043 Value: 20  Virtual address: 53656 Physical address: 920 Value: 0  Virtual address: 26449 Physical address: 24401 Value: 0  Virtual address: 34935 Physical address: 26743 Value: 29  Virtual address: 19864 Physical address: 36504 Value: 0  Virtual address: 51388 Physical address: 32700 Value: 0  Virtual address: 15155 Physical address: 32307 Value: -52  Virtual address: 64775 Physical address: 2055 Value: 65  Virtual address: 47969 Physical address: 25697 Value: 0  Virtual address: 16315 Physical address: 55995 Value: -18  Virtual address: 1342 Physical address: 51518 Value: 1  Virtual address: 51185 Physical address: 42993 Value: 0  Virtual address: 6043 Physical address: 9371 Value: -26  Virtual address: 21398 Physical address: 9110 Value: 20  Virtual address: 3273 Physical address: 40393 Value: 0  Virtual address: 9370 Physical address: 22938 Value: 9  Virtual address: 35463 Physical address: 56199 Value: -95  Virtual address: 28205 Physical address: 34861 Value: 0  Virtual address: 2351 Physical address: 4655 Value: 75  Virtual address: 28999 Physical address: 16455 Value: 81  Virtual address: 47699 Physical address: 56403 Value: -108  Virtual address: 46870 Physical address: 19734 Value: 45  Virtual address: 22311 Physical address: 11303 Value: -55  Virtual address: 22124 Physical address: 56684 Value: 0  Virtual address: 22427 Physical address: 11419 Value: -26  Virtual address: 49344 Physical address: 8640 Value: 0  Virtual address: 23224 Physical address: 36024 Value: 0  Virtual address: 5514 Physical address: 21642 Value: 5  Virtual address: 20504 Physical address: 56856 Value: 0  Virtual address: 376 Physical address: 57208 Value: 0  Virtual address: 2014 Physical address: 33246 Value: 1  Virtual address: 38700 Physical address: 46892 Value: 0  Virtual address: 13098 Physical address: 44330 Value: 12  Virtual address: 62435 Physical address: 24035 Value: -8  Virtual address: 48046 Physical address: 25774 Value: 46  Virtual address: 63464 Physical address: 17128 Value: 0  Virtual address: 12798 Physical address: 31230 Value: 12  Virtual address: 51178 Physical address: 42986 Value: 49  Virtual address: 8627 Physical address: 20147 Value: 108  Virtual address: 27083 Physical address: 27083 Value: 114  Virtual address: 47198 Physical address: 29790 Value: 46  Virtual address: 44021 Physical address: 57589 Value: 0  Virtual address: 32792 Physical address: 4120 Value: 0  Virtual address: 43996 Physical address: 57564 Value: 0  Virtual address: 41126 Physical address: 8870 Value: 40  Virtual address: 64244 Physical address: 4596 Value: 0  Virtual address: 37047 Physical address: 18359 Value: 45  Virtual address: 60281 Physical address: 57721 Value: 0  Virtual address: 52904 Physical address: 47784 Value: 0  Virtual address: 7768 Physical address: 57944 Value: 0  Virtual address: 55359 Physical address: 58175 Value: 15  Virtual address: 3230 Physical address: 40350 Value: 3  Virtual address: 44813 Physical address: 13069 Value: 0  Virtual address: 4116 Physical address: 50708 Value: 0  Virtual address: 65222 Physical address: 48582 Value: 63  Virtual address: 28083 Physical address: 3507 Value: 108  Virtual address: 60660 Physical address: 7412 Value: 0  Virtual address: 39 Physical address: 58407 Value: 9  Virtual address: 328 Physical address: 57160 Value: 0  Virtual address: 47868 Physical address: 56572 Value: 0  Virtual address: 13009 Physical address: 30417 Value: 0  Virtual address: 22378 Physical address: 11370 Value: 21  Virtual address: 39304 Physical address: 55688 Value: 0  Virtual address: 11171 Physical address: 40099 Value: -24  Virtual address: 8079 Physical address: 33935 Value: -29  Virtual address: 52879 Physical address: 47759 Value: -93  Virtual address: 5123 Physical address: 15107 Value: 0  Virtual address: 4356 Physical address: 58628 Value: 0  Virtual address: 45745 Physical address: 7857 Value: 0  Virtual address: 32952 Physical address: 4280 Value: 0  Virtual address: 4657 Physical address: 27697 Value: 0  Virtual address: 24142 Physical address: 33614 Value: 23  Virtual address: 23319 Physical address: 20503 Value: -59  Virtual address: 13607 Physical address: 53031 Value: 73  Virtual address: 46304 Physical address: 50144 Value: 0  Virtual address: 17677 Physical address: 9741 Value: 0  Virtual address: 59691 Physical address: 47403 Value: 74  Virtual address: 50967 Physical address: 42775 Value: -59  Virtual address: 7817 Physical address: 57993 Value: 0  Virtual address: 8545 Physical address: 20065 Value: 0  Virtual address: 55297 Physical address: 58113 Value: 0  Virtual address: 52954 Physical address: 47834 Value: 51  Virtual address: 39720 Physical address: 38184 Value: 0  Virtual address: 18455 Physical address: 5399 Value: 5  Virtual address: 30349 Physical address: 59021 Value: 0  Virtual address: 63270 Physical address: 16934 Value: 61  Virtual address: 27156 Physical address: 28692 Value: 0  Virtual address: 20614 Physical address: 56966 Value: 20  Virtual address: 19372 Physical address: 14252 Value: 0  Virtual address: 48689 Physical address: 32817 Value: 0  Virtual address: 49386 Physical address: 8682 Value: 48  Virtual address: 50584 Physical address: 18584 Value: 0  Virtual address: 51936 Physical address: 27360 Value: 0  Virtual address: 34705 Physical address: 18065 Value: 0  Virtual address: 13653 Physical address: 53077 Value: 0  Virtual address: 50077 Physical address: 59293 Value: 0  Virtual address: 54518 Physical address: 19446 Value: 53  Virtual address: 41482 Physical address: 41738 Value: 40  Virtual address: 4169 Physical address: 50761 Value: 0  Virtual address: 36118 Physical address: 54550 Value: 35  Virtual address: 9584 Physical address: 59504 Value: 0  Virtual address: 18490 Physical address: 5434 Value: 18  Virtual address: 55420 Physical address: 58236 Value: 0  Virtual address: 5708 Physical address: 52044 Value: 0  Virtual address: 23506 Physical address: 20690 Value: 22  Virtual address: 15391 Physical address: 31775 Value: 7  Virtual address: 36368 Physical address: 14352 Value: 0  Virtual address: 38976 Physical address: 3904 Value: 0  Virtual address: 50406 Physical address: 14054 Value: 49  Virtual address: 49236 Physical address: 8532 Value: 0  Virtual address: 65035 Physical address: 48395 Value: -126  Virtual address: 30120 Physical address: 680 Value: 0  Virtual address: 62551 Physical address: 343 Value: 21  Virtual address: 46809 Physical address: 55513 Value: 0  Virtual address: 21687 Physical address: 52407 Value: 45  Virtual address: 53839 Physical address: 54095 Value: -109  Virtual address: 2098 Physical address: 35122 Value: 2  Virtual address: 12364 Physical address: 45132 Value: 0  Virtual address: 45366 Physical address: 45878 Value: 44  Virtual address: 50437 Physical address: 18437 Value: 0  Virtual address: 36675 Physical address: 35651 Value: -48  Virtual address: 55382 Physical address: 58198 Value: 54  Virtual address: 11846 Physical address: 59718 Value: 11  Virtual address: 49127 Physical address: 50663 Value: -7  Virtual address: 19900 Physical address: 36540 Value: 0  Virtual address: 20554 Physical address: 56906 Value: 20  Virtual address: 19219 Physical address: 14099 Value: -60  Virtual address: 51483 Physical address: 15899 Value: 70  Virtual address: 58090 Physical address: 3306 Value: 56  Virtual address: 39074 Physical address: 4002 Value: 38  Virtual address: 16060 Physical address: 21180 Value: 0  Virtual address: 10447 Physical address: 14799 Value: 51  Virtual address: 54169 Physical address: 51865 Value: 0  Virtual address: 20634 Physical address: 56986 Value: 20  Virtual address: 57555 Physical address: 38099 Value: 52  Virtual address: 61210 Physical address: 42266 Value: 59  Virtual address: 269 Physical address: 57101 Value: 0  Virtual address: 33154 Physical address: 53634 Value: 32  Virtual address: 64487 Physical address: 5095 Value: -7  Virtual address: 61223 Physical address: 42279 Value: -55  Virtual address: 47292 Physical address: 29884 Value: 0  Virtual address: 21852 Physical address: 24156 Value: 0  Virtual address: 5281 Physical address: 15265 Value: 0  Virtual address: 45912 Physical address: 51032 Value: 0  Virtual address: 32532 Physical address: 9492 Value: 0  Virtual address: 63067 Physical address: 22107 Value: -106  Virtual address: 41683 Physical address: 41939 Value: -76  Virtual address: 20981 Physical address: 39157 Value: 0  Virtual address: 33881 Physical address: 42073 Value: 0  Virtual address: 41785 Physical address: 38713 Value: 0  Virtual address: 4580 Physical address: 58852 Value: 0  Virtual address: 41389 Physical address: 25005 Value: 0  Virtual address: 28572 Physical address: 28060 Value: 0  Virtual address: 782 Physical address: 7950 Value: 0  Virtual address: 30273 Physical address: 58945 Value: 0  Virtual address: 62267 Physical address: 23867 Value: -50  Virtual address: 17922 Physical address: 18690 Value: 17  Virtual address: 63238 Physical address: 16902 Value: 61  Virtual address: 3308 Physical address: 40428 Value: 0  Virtual address: 26545 Physical address: 24497 Value: 0  Virtual address: 44395 Physical address: 44907 Value: 90  Virtual address: 39120 Physical address: 4048 Value: 0  Virtual address: 21706 Physical address: 52426 Value: 21  Virtual address: 7144 Physical address: 26600 Value: 0  Virtual address: 30244 Physical address: 58916 Value: 0  Virtual address: 3725 Physical address: 10125 Value: 0  Virtual address: 54632 Physical address: 48744 Value: 0  Virtual address: 30574 Physical address: 16238 Value: 29  Virtual address: 8473 Physical address: 19993 Value: 0  Virtual address: 12386 Physical address: 45154 Value: 12  Virtual address: 41114 Physical address: 8858 Value: 40  Virtual address: 57930 Physical address: 3146 Value: 56  Virtual address: 15341 Physical address: 32493 Value: 0  Virtual address: 15598 Physical address: 31982 Value: 15  Virtual address: 59922 Physical address: 10514 Value: 58  Virtual address: 18226 Physical address: 2354 Value: 17  Virtual address: 48162 Physical address: 17698 Value: 47  Virtual address: 41250 Physical address: 24866 Value: 40  Virtual address: 1512 Physical address: 51688 Value: 0  Virtual address: 2546 Physical address: 4850 Value: 2  Virtual address: 41682 Physical address: 41938 Value: 40  Virtual address: 322 Physical address: 57154 Value: 0  Virtual address: 880 Physical address: 8048 Value: 0  Virtual address: 20891 Physical address: 39067 Value: 102  Virtual address: 56604 Physical address: 13340 Value: 0  Virtual address: 40166 Physical address: 1254 Value: 39  Virtual address: 26791 Physical address: 42663 Value: 41  Virtual address: 44560 Physical address: 11024 Value: 0  Virtual address: 38698 Physical address: 46890 Value: 37  Virtual address: 64127 Physical address: 4479 Value: -97  Virtual address: 15028 Physical address: 24756 Value: 0  Virtual address: 38669 Physical address: 46861 Value: 0  Virtual address: 45637 Physical address: 7749 Value: 0  Virtual address: 43151 Physical address: 17551 Value: 35  Virtual address: 9465 Physical address: 23033 Value: 0  Virtual address: 2498 Physical address: 4802 Value: 2  Virtual address: 13978 Physical address: 31386 Value: 13  Virtual address: 16326 Physical address: 56006 Value: 15  Virtual address: 51442 Physical address: 32754 Value: 50  Virtual address: 34845 Physical address: 26653 Value: 0  Virtual address: 63667 Physical address: 28339 Value: 44  Virtual address: 39370 Physical address: 55754 Value: 38  Virtual address: 55671 Physical address: 60023 Value: 93  Virtual address: 64496 Physical address: 5104 Value: 0  Virtual address: 7767 Physical address: 57943 Value: -107  Virtual address: 6283 Physical address: 7563 Value: 34  Virtual address: 55884 Physical address: 34636 Value: 0  Virtual address: 61103 Physical address: 6063 Value: -85  Virtual address: 10184 Physical address: 60360 Value: 0  Virtual address: 39543 Physical address: 43383 Value: -99  Virtual address: 9555 Physical address: 59475 Value: 84  Virtual address: 13963 Physical address: 31371 Value: -94  Virtual address: 58975 Physical address: 14943 Value: -105  Virtual address: 19537 Physical address: 22609 Value: 0  Virtual address: 6101 Physical address: 9429 Value: 0  Virtual address: 41421 Physical address: 25037 Value: 0  Virtual address: 45502 Physical address: 46014 Value: 44  Virtual address: 29328 Physical address: 37008 Value: 0  Virtual address: 8149 Physical address: 34005 Value: 0  Virtual address: 25450 Physical address: 60522 Value: 24  Virtual address: 58944 Physical address: 14912 Value: 0  Virtual address: 50666 Physical address: 18666 Value: 49  Virtual address: 23084 Physical address: 35884 Value: 0  Virtual address: 36468 Physical address: 14452 Value: 0  Virtual address: 33645 Physical address: 60781 Value: 0  Virtual address: 25002 Physical address: 52650 Value: 24  Virtual address: 53715 Physical address: 979 Value: 116  Virtual address: 60173 Physical address: 57613 Value: 0  Virtual address: 46354 Physical address: 50194 Value: 45  Virtual address: 4708 Physical address: 27748 Value: 0  Virtual address: 28208 Physical address: 34864 Value: 0  Virtual address: 58844 Physical address: 55260 Value: 0  Virtual address: 22173 Physical address: 56733 Value: 0  Virtual address: 8535 Physical address: 20055 Value: 85  Virtual address: 42261 Physical address: 10773 Value: 0  Virtual address: 29687 Physical address: 49655 Value: -3  Virtual address: 37799 Physical address: 29351 Value: -23  Virtual address: 22566 Physical address: 2854 Value: 22  Virtual address: 62520 Physical address: 312 Value: 0  Virtual address: 4098 Physical address: 50690 Value: 4  Virtual address: 47999 Physical address: 25727 Value: -33  Virtual address: 49660 Physical address: 45564 Value: 0  Virtual address: 37063 Physical address: 18375 Value: 49  Virtual address: 41856 Physical address: 38784 Value: 0  Virtual address: 5417 Physical address: 21545 Value: 0  Virtual address: 48856 Physical address: 32984 Value: 0  Virtual address: 10682 Physical address: 27578 Value: 10  Virtual address: 22370 Physical address: 11362 Value: 21  Virtual address: 63281 Physical address: 16945 Value: 0  Virtual address: 62452 Physical address: 24052 Value: 0  Virtual address: 50532 Physical address: 18532 Value: 0  Virtual address: 9022 Physical address: 48190 Value: 8  Virtual address: 59300 Physical address: 10404 Value: 0  Virtual address: 58660 Physical address: 55076 Value: 0  Virtual address: 56401 Physical address: 51281 Value: 0  Virtual address: 8518 Physical address: 20038 Value: 8  Virtual address: 63066 Physical address: 22106 Value: 61  Virtual address: 63250 Physical address: 16914 Value: 61  Virtual address: 48592 Physical address: 2000 Value: 0  Virtual address: 28771 Physical address: 1379 Value: 24  Virtual address: 37673 Physical address: 29225 Value: 0  Virtual address: 60776 Physical address: 23656 Value: 0  Virtual address: 56438 Physical address: 51318 Value: 55  Virtual address: 60424 Physical address: 7176 Value: 0  Virtual address: 39993 Physical address: 1081 Value: 0  Virtual address: 56004 Physical address: 34756 Value: 0  Virtual address: 59002 Physical address: 14970 Value: 57  Virtual address: 33982 Physical address: 42174 Value: 33  Virtual address: 25498 Physical address: 60570 Value: 24  Virtual address: 57047 Physical address: 37591 Value: -75  Virtual address: 1401 Physical address: 51577 Value: 0  Virtual address: 15130 Physical address: 32282 Value: 14  Virtual address: 42960 Physical address: 19664 Value: 0  Virtual address: 61827 Physical address: 22403 Value: 96  Virtual address: 32442 Physical address: 7098 Value: 31  Virtual address: 64304 Physical address: 4912 Value: 0  Virtual address: 30273 Physical address: 58945 Value: 0  Virtual address: 38082 Physical address: 37314 Value: 37  Virtual address: 22404 Physical address: 11396 Value: 0  Virtual address: 3808 Physical address: 10208 Value: 0  Virtual address: 16883 Physical address: 48115 Value: 124  Virtual address: 23111 Physical address: 35911 Value: -111  Virtual address: 62417 Physical address: 24017 Value: 0  Virtual address: 60364 Physical address: 57804 Value: 0  Virtual address: 4542 Physical address: 58814 Value: 4  Virtual address: 14829 Physical address: 33517 Value: 0  Virtual address: 44964 Physical address: 13220 Value: 0  Virtual address: 33924 Physical address: 42116 Value: 0  Virtual address: 2141 Physical address: 35165 Value: 0  Virtual address: 19245 Physical address: 14125 Value: 0  Virtual address: 47168 Physical address: 29760 Value: 0  Virtual address: 24048 Physical address: 39664 Value: 0  Virtual address: 1022 Physical address: 8190 Value: 0  Virtual address: 23075 Physical address: 35875 Value: -120  Virtual address: 24888 Physical address: 52536 Value: 0  Virtual address: 49247 Physical address: 8543 Value: 23  Virtual address: 4900 Physical address: 13604 Value: 0  Virtual address: 22656 Physical address: 2944 Value: 0  Virtual address: 34117 Physical address: 60997 Value: 0  Virtual address: 55555 Physical address: 59907 Value: 64  Virtual address: 48947 Physical address: 50483 Value: -52  Virtual address: 59533 Physical address: 25997 Value: 0  Virtual address: 21312 Physical address: 9024 Value: 0  Virtual address: 21415 Physical address: 9127 Value: -23  Virtual address: 813 Physical address: 7981 Value: 0  Virtual address: 19419 Physical address: 14299 Value: -10  Virtual address: 1999 Physical address: 33231 Value: -13  Virtual address: 20155 Physical address: 40635 Value: -82  Virtual address: 21521 Physical address: 52241 Value: 0  Virtual address: 13670 Physical address: 53094 Value: 13  Virtual address: 19289 Physical address: 14169 Value: 0  Virtual address: 58483 Physical address: 15475 Value: 28  Virtual address: 41318 Physical address: 24934 Value: 40  Virtual address: 16151 Physical address: 55831 Value: -59  Virtual address: 13611 Physical address: 53035 Value: 74  Virtual address: 21514 Physical address: 52234 Value: 21  Virtual address: 13499 Physical address: 36283 Value: 46  Virtual address: 45583 Physical address: 7695 Value: -125  Virtual address: 49013 Physical address: 50549 Value: 0  Virtual address: 64843 Physical address: 2123 Value: 82  Virtual address: 63485 Physical address: 17149 Value: 0  Virtual address: 38697 Physical address: 46889 Value: 0  Virtual address: 59188 Physical address: 10292 Value: 0  Virtual address: 24593 Physical address: 38417 Value: 0  Virtual address: 57641 Physical address: 61225 Value: 0  Virtual address: 36524 Physical address: 14508 Value: 0  Virtual address: 56980 Physical address: 37524 Value: 0  Virtual address: 36810 Physical address: 35786 Value: 35  Virtual address: 6096 Physical address: 9424 Value: 0  Virtual address: 11070 Physical address: 39998 Value: 10  Virtual address: 60124 Physical address: 10716 Value: 0  Virtual address: 37576 Physical address: 21448 Value: 0  Virtual address: 15096 Physical address: 24824 Value: 0  Virtual address: 45247 Physical address: 49087 Value: 47  Virtual address: 32783 Physical address: 4111 Value: 3  Virtual address: 58390 Physical address: 15382 Value: 57  Virtual address: 60873 Physical address: 23753 Value: 0  Virtual address: 23719 Physical address: 54951 Value: 41  Virtual address: 24385 Physical address: 1601 Value: 0  Virtual address: 22307 Physical address: 11299 Value: -56  Virtual address: 17375 Physical address: 61663 Value: -9  Virtual address: 15990 Physical address: 21110 Value: 15  Virtual address: 20526 Physical address: 56878 Value: 20  Virtual address: 25904 Physical address: 36656 Value: 0  Virtual address: 42224 Physical address: 46320 Value: 0  Virtual address: 9311 Physical address: 22879 Value: 23  Virtual address: 7862 Physical address: 58038 Value: 7  Virtual address: 3835 Physical address: 10235 Value: -66  Virtual address: 30535 Physical address: 16199 Value: -47  Virtual address: 65179 Physical address: 48539 Value: -90  Virtual address: 57387 Physical address: 37931 Value: 10  Virtual address: 63579 Physical address: 28251 Value: 22  Virtual address: 4946 Physical address: 13650 Value: 4  Virtual address: 9037 Physical address: 48205 Value: 0  Virtual address: 61033 Physical address: 5993 Value: 0  Virtual address: 55543 Physical address: 58359 Value: 61  Virtual address: 50361 Physical address: 14009 Value: 0  Virtual address: 6480 Physical address: 29008 Value: 0  Virtual address: 14042 Physical address: 31450 Value: 13  Virtual address: 21531 Physical address: 52251 Value: 6  Virtual address: 39195 Physical address: 55579 Value: 70  Virtual address: 37511 Physical address: 21383 Value: -95  Virtual address: 23696 Physical address: 54928 Value: 0  Virtual address: 27440 Physical address: 15664 Value: 0  Virtual address: 28201 Physical address: 34857 Value: 0  Virtual address: 23072 Physical address: 35872 Value: 0  Virtual address: 7814 Physical address: 57990 Value: 7  Virtual address: 6552 Physical address: 29080 Value: 0  Virtual address: 43637 Physical address: 12661 Value: 0  Virtual address: 35113 Physical address: 39721 Value: 0  Virtual address: 34890 Physical address: 26698 Value: 34  Virtual address: 61297 Physical address: 42353 Value: 0  Virtual address: 45633 Physical address: 7745 Value: 0  Virtual address: 61431 Physical address: 42487 Value: -3  Virtual address: 46032 Physical address: 51152 Value: 0  Virtual address: 18774 Physical address: 61782 Value: 18  Virtual address: 62991 Physical address: 22031 Value: -125  Virtual address: 28059 Physical address: 3483 Value: 102  Virtual address: 35229 Physical address: 39837 Value: 0  Virtual address: 51230 Physical address: 32542 Value: 50  Virtual address: 14405 Physical address: 5701 Value: 0  Virtual address: 52242 Physical address: 46610 Value: 51  Virtual address: 43153 Physical address: 17553 Value: 0  Virtual address: 2709 Physical address: 53909 Value: 0  Virtual address: 47963 Physical address: 25691 Value: -42  Virtual address: 36943 Physical address: 18255 Value: 19  Virtual address: 54066 Physical address: 51762 Value: 52  Virtual address: 10054 Physical address: 60230 Value: 9  Virtual address: 43051 Physical address: 17451 Value: 10  Virtual address: 11525 Physical address: 41477 Value: 0  Virtual address: 17684 Physical address: 9748 Value: 0  Virtual address: 41681 Physical address: 41937 Value: 0  Virtual address: 27883 Physical address: 44267 Value: 58  Virtual address: 56909 Physical address: 37453 Value: 0  Virtual address: 45772 Physical address: 7884 Value: 0  Virtual address: 27496 Physical address: 15720 Value: 0  Virtual address: 46842 Physical address: 55546 Value: 45  Virtual address: 38734 Physical address: 46926 Value: 37  Virtual address: 28972 Physical address: 16428 Value: 0  Virtual address: 59684 Physical address: 47396 Value: 0  Virtual address: 11384 Physical address: 54392 Value: 0  Virtual address: 21018 Physical address: 37658 Value: 20  Virtual address: 2192 Physical address: 35216 Value: 0  Virtual address: 18384 Physical address: 2512 Value: 0  Virtual address: 13464 Physical address: 36248 Value: 0  Virtual address: 31018 Physical address: 61994 Value: 30  Virtual address: 62958 Physical address: 28654 Value: 61  Virtual address: 30611 Physical address: 16275 Value: -28  Virtual address: 1913 Physical address: 33145 Value: 0  Virtual address: 18904 Physical address: 61912 Value: 0  Virtual address: 26773 Physical address: 42645 Value: 0  Virtual address: 55491 Physical address: 58307 Value: 48  Virtual address: 21899 Physical address: 24203 Value: 98  Virtual address: 64413 Physical address: 5021 Value: 0  Virtual address: 47134 Physical address: 29726 Value: 46  Virtual address: 23172 Physical address: 35972 Value: 0  Virtual address: 7262 Physical address: 43102 Value: 7  Virtual address: 12705 Physical address: 31137 Value: 0  Virtual address: 7522 Physical address: 6242 Value: 7  Virtual address: 58815 Physical address: 55231 Value: 111  Virtual address: 34916 Physical address: 26724 Value: 0  Virtual address: 3802 Physical address: 10202 Value: 3  Virtual address: 58008 Physical address: 3224 Value: 0  Virtual address: 1239 Physical address: 40919 Value: 53  Virtual address: 63947 Physical address: 21963 Value: 114  Virtual address: 381 Physical address: 57213 Value: 0  Virtual address: 60734 Physical address: 23614 Value: 59  Virtual address: 48769 Physical address: 32897 Value: 0  Virtual address: 41938 Physical address: 38866 Value: 40  Virtual address: 38025 Physical address: 37257 Value: 0  Virtual address: 55099 Physical address: 5179 Value: -50  Virtual address: 56691 Physical address: 13427 Value: 92  Virtual address: 39530 Physical address: 43370 Value: 38  Virtual address: 59003 Physical address: 14971 Value: -98  Virtual address: 6029 Physical address: 9357 Value: 0  Virtual address: 20920 Physical address: 39096 Value: 0  Virtual address: 8077 Physical address: 33933 Value: 0  Virtual address: 42633 Physical address: 20873 Value: 0  Virtual address: 17443 Physical address: 40995 Value: 8  Virtual address: 53570 Physical address: 834 Value: 52  Virtual address: 22833 Physical address: 52785 Value: 0  Virtual address: 3782 Physical address: 10182 Value: 3  Virtual address: 47758 Physical address: 56462 Value: 46  Virtual address: 22136 Physical address: 56696 Value: 0  Virtual address: 22427 Physical address: 11419 Value: -26  Virtual address: 23867 Physical address: 39483 Value: 78  Virtual address: 59968 Physical address: 10560 Value: 0  Virtual address: 62166 Physical address: 62422 Value: 60  Virtual address: 6972 Physical address: 26428 Value: 0  Virtual address: 63684 Physical address: 28356 Value: 0  Virtual address: 46388 Physical address: 50228 Value: 0  Virtual address: 41942 Physical address: 38870 Value: 40  Virtual address: 36524 Physical address: 14508 Value: 0  Virtual address: 9323 Physical address: 22891 Value: 26  Virtual address: 31114 Physical address: 62090 Value: 30  Virtual address: 22345 Physical address: 11337 Value: 0  Virtual address: 46463 Physical address: 50303 Value: 95  Virtual address: 54671 Physical address: 48783 Value: 99  Virtual address: 9214 Physical address: 48382 Value: 8  Virtual address: 7257 Physical address: 43097 Value: 0  Virtual address: 33150 Physical address: 53630 Value: 32  Virtual address: 41565 Physical address: 41821 Value: 0  Virtual address: 26214 Physical address: 49254 Value: 25  Virtual address: 3595 Physical address: 9995 Value: -126  Virtual address: 17932 Physical address: 18700 Value: 0  Virtual address: 34660 Physical address: 18020 Value: 0  Virtual address: 51961 Physical address: 27385 Value: 0  Virtual address: 58634 Physical address: 55050 Value: 57  Virtual address: 57990 Physical address: 3206 Value: 56  Virtual address: 28848 Physical address: 1456 Value: 0  Virtual address: 49920 Physical address: 59136 Value: 0  Virtual address: 18351 Physical address: 2479 Value: -21  Virtual address: 53669 Physical address: 933 Value: 0  Virtual address: 33996 Physical address: 42188 Value: 0  Virtual address: 6741 Physical address: 6741 Value: 0  Virtual address: 64098 Physical address: 4450 Value: 62  Virtual address: 606 Physical address: 17246 Value: 0  Virtual address: 27383 Physical address: 28919 Value: -67  Virtual address: 63140 Physical address: 22180 Value: 0  Virtual address: 32228 Physical address: 49892 Value: 0  Virtual address: 63437 Physical address: 17101 Value: 0  Virtual address: 29085 Physical address: 16541 Value: 0  Virtual address: 65080 Physical address: 48440 Value: 0  Virtual address: 38753 Physical address: 46945 Value: 0  Virtual address: 16041 Physical address: 21161 Value: 0  Virtual address: 9041 Physical address: 48209 Value: 0  Virtual address: 42090 Physical address: 46186 Value: 41  Virtual address: 46388 Physical address: 50228 Value: 0  Virtual address: 63650 Physical address: 28322 Value: 62  Virtual address: 36636 Physical address: 35612 Value: 0  Virtual address: 21947 Physical address: 24251 Value: 110  Virtual address: 19833 Physical address: 36473 Value: 0  Virtual address: 36464 Physical address: 14448 Value: 0  Virtual address: 8541 Physical address: 20061 Value: 0  Virtual address: 12712 Physical address: 31144 Value: 0  Virtual address: 48955 Physical address: 50491 Value: -50  Virtual address: 39206 Physical address: 55590 Value: 38  Virtual address: 15578 Physical address: 31962 Value: 15  Virtual address: 49205 Physical address: 8501 Value: 0  Virtual address: 7731 Physical address: 57907 Value: -116  Virtual address: 43046 Physical address: 17446 Value: 42  Virtual address: 60498 Physical address: 7250 Value: 59  Virtual address: 9237 Physical address: 22805 Value: 0  Virtual address: 47706 Physical address: 56410 Value: 46  Virtual address: 43973 Physical address: 57541 Value: 0  Virtual address: 42008 Physical address: 46104 Value: 0  Virtual address: 27460 Physical address: 15684 Value: 0  Virtual address: 24999 Physical address: 52647 Value: 105  Virtual address: 51933 Physical address: 27357 Value: 0  Virtual address: 34070 Physical address: 60950 Value: 33  Virtual address: 65155 Physical address: 48515 Value: -96  Virtual address: 59955 Physical address: 10547 Value: -116  Virtual address: 9277 Physical address: 22845 Value: 0  Virtual address: 20420 Physical address: 16836 Value: 0  Virtual address: 44860 Physical address: 13116 Value: 0  Virtual address: 50992 Physical address: 42800 Value: 0  Virtual address: 10583 Physical address: 27479 Value: 85  Virtual address: 57751 Physical address: 61335 Value: 101  Virtual address: 23195 Physical address: 35995 Value: -90  Virtual address: 27227 Physical address: 28763 Value: -106  Virtual address: 42816 Physical address: 19520 Value: 0  Virtual address: 58219 Physical address: 34155 Value: -38  Virtual address: 37606 Physical address: 21478 Value: 36  Virtual address: 18426 Physical address: 2554 Value: 17  Virtual address: 21238 Physical address: 37878 Value: 20  Virtual address: 11983 Physical address: 59855 Value: -77  Virtual address: 48394 Physical address: 1802 Value: 47  Virtual address: 11036 Physical address: 39964 Value: 0  Virtual address: 30557 Physical address: 16221 Value: 0  Virtual address: 23453 Physical address: 20637 Value: 0  Virtual address: 49847 Physical address: 31671 Value: -83  Virtual address: 30032 Physical address: 592 Value: 0  Virtual address: 48065 Physical address: 25793 Value: 0  Virtual address: 6957 Physical address: 26413 Value: 0  Virtual address: 2301 Physical address: 35325 Value: 0  Virtual address: 7736 Physical address: 57912 Value: 0  Virtual address: 31260 Physical address: 23324 Value: 0  Virtual address: 17071 Physical address: 175 Value: -85  Virtual address: 8940 Physical address: 46572 Value: 0  Virtual address: 9929 Physical address: 44745 Value: 0  Virtual address: 45563 Physical address: 46075 Value: 126  Virtual address: 12107 Physical address: 2635 Value: -46 |

Статистика:

– частота попаданий в TLB равна 0.062000.

– частота ошибок страниц равна 0.244000.

# Вывод

Программа успешно выполняет преобразование логических адресов в физические с применением TLB и таблицы страниц. В процессе выполнения программы реализованы этапы обработки ошибок страниц с использованием подкачки по запросу, управления TLB и алгоритма замещения страниц. Полученные результаты программы позволяют понять основные этапы преобразования логических адресов, а также оценить эффективность применения TLB и методов управления памятью.