WEEK 2 PROGRAMMING ASSIGNMENT

Voting in Siruseri

Zonal Computing Olympiad 2010

Elections are on for the Siruseri Town Council. Elections in Siruseri work in a rather odd manner. Each candidate is assigned a unique identification number. The town is divided into five zones and each zone proposes a list of candidates, in some arbitrary order, that it would like to nominate to the Council. Any candidate who is proposed by three or more zones is elected. There is no lower limit or upper limit on the size of the Council.

Your task is to to calculate how many candidates are elected to the Council, given the lists proposed by the five zones.

For example, suppose the candidates proposed by the five zones are as follows:

- *Zone 1:* [12,387,15,162,5]
- *Zone 2:* [14,162,92,387,7,748]
- *Zone 3:* [14,5,12,387]
- *Zone 4:* [17,952,12,92,398,849]
- *Zone 5:* [14,5,92,12,387]

In this example, 5 candidates are elected: these are [12,387,5,14,92].

Solution hint

Sort each list and then do a 5-way merge.

Input format

The first line of the input contains five integers N_1, N_2 N_3, N_4 and N_5, where N_j is the number of candidates proposed by zone j, $1 \le j \le 5$. This is followed by five lines of space separated integers. For $1 \le j \le 5$, line j+1 of the input has N_j integers representing the list of candidates proposed by zone j.

Output format

Your output should be a single line consisting of one integer, the total number of candidates elected to the Town Council.

Output format

Your output should be a single line consisting of one integer, the total number of candidates elected to the Town Council.

Testdata

In all cases, $1 \leq N_1, N_2, N_3, N_4, N_5 \leq 50{,}000$. Each candidate ID is between 0 and 500,000. Also, each individual list is guaranteed to be free of duplicate entries.

Sample Input

```
5 6 4 6 5
12 387 15 162 5
14 162 92 387 7 748
14 5 12 387
17 952 12 92 398 849
14 5 92 12 387
```

Sample Output

```
5
```

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1	5 6 4 6 5 12 387 15 162 5 14 162 92 387 7 748 14 5 12 387 17 952 12 92 398 849 14 5 92 12 387	5\n	5 \n	Passed

Test Case 5

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54 28 41 84 66
230 404 416 7 319 471 299 59 104 359 431 264 396 321 356 294 499 117 465 148
69 248 262 165 284 190 207 289 15 340 389 224 27 439 219 52 62 45 172 442 15
5 355 487 76 358 202 349 377 67 310 122 482 40 347
53 83 114 66 111 329 300 189 139 116 128 371 427 26 153 416 92 347 364 7 82
352 323 54 94 136 321 84
154 238 207 321 248 363 235 417 322 267 492 206 232 112 478 101 436 454 332
391 162 455 96 408 216 212 257 39 375 201 243 437 172 138 184 44 150 346 475
265 426
277 471 150 72 194 85 164 193 153 329 182 241 483 346 196 304 24 490 367 110
391 49 468 268 417 245 246 458 282 290 477 90 272 423 318 151 83 442 415 33
418 301 129 284 216 420 487 14 147 8 225 460 84 180 324 52 433 456 291 457 3
28 363 323 267 70 445 419 5 10 287 169 139 238 316 416 206 398 119 465 331 1
09 333 7 467
308 19 403 221 123 28 118 478 157 64 329 78 131 65 419 177 220 33 142 125 36
6 359 149 41 129 244 453 138 151 415 106 85 381 204 20 432 363 353 253 414 3
2 356 261 385 182 104 424 399 227 94 476 114 60 245 493 354 97 457 263 281 1
5 201 37 483 436 89
```

5\n | 5\n | Passed

Test Case 6

```
48 87 92 33 12
455 433 154 21 285 344 202 347 345 330 470 121 357 335 382 103 340 132 214 2
05 394 451 173 359 299 26 33 217 218 20 329 412 80 229 387 350 337 295 415 2
08 22 138 293 370 442 189 449 14
487 396 43 68 493 249 237 435 170 371 463 182 105 59 276 427 80 301 242 336
238 215 225 461 406 224 110 55 27 471 465 222 448 312 220 464 190 425 366 28
339 337 347 391 356 13 375 381 192 61 315 25 403 129 431 292 496 49 142 204
10 67 104 434 247 495 181 165 51 328 284 384 293 400 202 449 120 53 428 322
137 5 154 231 350 125 297
16 499 375 45 318 422 462 191 144 320 242 452 9 482 418 428 65 285 431 483 1
17 400 328 427 5 201 114 471 334 91 484 58 470 70 265 2 38 8 180 324 113 489
4 135 52 79 231 193 220 105 74 141 202 347 6 448 349 407 496 361 1 71 238 68
281 66 371 185 398 94 60 168 64 54 218 99 88 475 492 137 477 178 133 257 24
164 151 366 36 460 293 118
192 390 121 426 239 182 345 451 488 111 31 408 73 36 262 86 234 331 372 418
296 500 142 213 379 23 278 357 384 25 203 167 92
497 324 243 313 466 337 458 391 208 393 134 376
```

4\n | 4\n | Passed