```
Friends.java starts
The following are friends
0 : 220 and 284
1 : 1184 and 1210
2 : 2620 and 2924
3 : 5020 and 5564
4 : 6232 and 6368
5 : 10744 and 10856
6 : 12285 and 14595
7 : 17296 and 18416
8 : 66928 and 66992
9 : 67095 and 71145
10 : 63020 and 76084
11 : 69615 and 87633
12 : 79750 and 88730
13 : 122368 and 123152
14 : 100485 and 124155
15 : 122265 and 139815
16 : 141664 and 153176
17 : 142310 and 168730
18 : 171856 and 176336
19 : 176272 and 180848
20 : 196724 and 202444
21 : 185368 and 203432
22 : 280540 and 365084
23 : 308620 and 389924
24 : 356408 and 399592
25 : 319550 and 430402
26 : 437456 and 455344
27 : 469028 and 486178
28 : 503056 and 514736
29 : 522405 and 525915
30 : 643336 and 652664
31 : 600392 and 669688
32 : 609928 and 686072
33 : 624184 and 691256
34 : 635624 and 712216
35 : 667964 and 783556
36 : 726104 and 796696
37 : 802725 and 863835
38 : 879712 and 901424
39 : 898216 and 980984
40 : 998104 and 1043096
41 : 1077890 and 1099390
42 : 947835 and 1125765
43 : 1154450 and 1189150
44 : 1185376 and 1286744
45 : 1156870 and 1292570
46 : 1280565 and 1340235
47 : 1175265 and 1438983
48 : 1392368 and 1464592
49 : 1328470 and 1483850
50 : 1358595 and 1486845
51 : 1511930 and 1598470
52 : 1466150 and 1747930
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 53 : 1468324 and 1749212
 54 : 1798875 and 1870245
 55 : 1669910 and 2062570
 56 : 2082464 and 2090656
 57 : 2236570 and 2429030
 58 : 2723792 and 2874064
 59 : 2739704 and 2928136
 60 : 2652728 and 2941672
 61 : 2802416 and 2947216
 62 : 2728726 and 3077354
 63 : 2803580 and 3716164
 64 : 3276856 and 3721544
 65 : 3606850 and 3892670
 66 : 3805264 and 4006736
 67 : 3786904 and 4300136
 68 : 4238984 and 4314616
 69 : 4259750 and 4445050
 70 : 4246130 and 4488910
 71 : 4482765 and 5120595
 72 : 4604776 and 5162744
 73 : 5459176 and 5495264
 74 : 5123090 and 5504110
 75 : 5357625 and 5684679
 76 : 5232010 and 5799542
 77 : 5385310 and 5812130
 78 : 5147032 and 5843048
 79 : 5730615 and 6088905
 80 : 4532710 and 6135962
 81 : 5726072 and 6369928
 82 : 6329416 and 6371384
 83 : 6377175 and 6680025
 84 : 6993610 and 7158710
 85 : 6955216 and 7418864
 86 : 7275532 and 7471508
 87 : 5864660 and 7489324
 88 : 7489112 and 7674088
 89 : 7677248 and 7684672
 90 : 7800544 and 7916696
 91 : 7850512 and 8052488
 92 : 7288930 and 8221598
 93 : 8262136 and 8369864
 94 : 7577350 and 8493050
 95 : 9363584 and 9437056
 96 : 9071685 and 9498555
 97 : 9199496 and 9592504
 98 : 8619765 and 9627915
 99 : 9339704 and 9892936
100 : 9660950 and 10025290
101 : 8826070 and 10043690
102 : 10254970 and 10273670
103 : 8666860 and 10638356
104 : 9206925 and 10791795
105 : 10572550 and 10854650
106 : 8754130 and 10893230
107 : 10533296 and 10949704
```

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108 : 9491625 and 10950615
109 : 9478910 and 11049730
110 : 10596368 and 11199112
111 : 9773505 and 11791935
112 : 11498355 and 12024045
113 : 10992735 and 12070305
114 : 11252648 and 12101272
115 : 11545616 and 12247504
116 : 11693290 and 12361622
117 : 12397552 and 13136528
118 : 11173460 and 13212076
119 : 11905504 and 13337336
120 : 13921528 and 13985672
121 : 10634085 and 14084763
122 : 12707704 and 14236136
123 : 13813150 and 14310050
124 : 14311688 and 14718712
125 : 15002464 and 15334304
126 : 13671735 and 15877065
127 : 14443730 and 15882670
128 : 16137628 and 16150628
129 : 15363832 and 16517768
130 : 14654150 and 16817050
131 : 15938055 and 17308665
132 : 17257695 and 17578785
133 : 17908064 and 18017056
134 : 14426230 and 18087818
135 : 18056312 and 18166888
136 : 17041010 and 19150222
137 : 18655744 and 19154336
138 : 16871582 and 19325698
139 : 17844255 and 19895265
140 : 17754165 and 19985355
141 : 20308995 and 20955645
142 : 20014808 and 21457192
143 : 18194715 and 22240485
144 : 20022328 and 22823432
145 : 21448630 and 23030090
146 : 22508145 and 23111055
147 : 22227075 and 24644925
148 : 23389695 and 25132545
149 : 23358248 and 25233112
150 : 22249552 and 25325528
151 : 25596544 and 25640096
152 : 22608632 and 25775368
153 : 26090325 and 26138475
154 : 25966832 and 26529808
155 : 23628940 and 27428276
156 : 28118032 and 28128368
157 : 28608424 and 29603576
158 : 24472180 and 30395276
159 : 30830696 and 31652704
160 : 31536855 and 32148585
161 : 30724694 and 32174506
162 : 32205616 and 34352624
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163 : 34364912 and 34380688
164 : 32685250 and 34538270
165 : 31818952 and 34860248
166 : 32642324 and 35095276
167 : 34256222 and 35997346
168 : 33501825 and 36136575
169 : 35472592 and 36415664
170 : 34765731 and 36939357
171 : 38400512 and 38938288
172 : 37848915 and 39202605
173 : 35390008 and 39259592
174 : 37784810 and 39944086
175 : 35373195 and 40105845
176 : 35361326 and 40117714
177 : 38637016 and 40678184
178 : 38807968 and 40912232
179 : 38783992 and 41654408
180 : 35115795 and 43266285
181 : 38663950 and 43362050
182 : 44139856 and 44916944
183 : 37363095 and 45663849
184 : 45263384 and 46137016
185 : 43096904 and 46715896
186 : 46991890 and 48471470
187 : 48641584 and 48852176
188 : 46271745 and 49125375
189 : 50997596 and 51737764
190 : 48639032 and 52967368
191 : 46521405 and 53011395
192 : 49215166 and 55349570
193 : 46555250 and 55880590
194 : 52695376 and 56208368
195 : 56055872 and 56598208
196 : 46237730 and 61319902
197 : 59497888 and 61953512
198 : 56924192 and 64562488
199 : 63560025 and 65003175
200 : 63717615 and 66011985
201 : 67729064 and 69439576
202 : 58580540 and 70507972
203 : 66854710 and 71946890
204 : 72958556 and 74733604
205 : 66595130 and 74824390
206 : 56512610 and 75866014
207 : 75171808 and 77237792
208 : 71241830 and 78057370
209 : 74055952 and 78166448
210 : 68891992 and 78437288
211 : 73032872 and 78469528
212 : 67738268 and 79732132
213 : 78447010 and 80960990
214 : 75226888 and 81265112
215 : 74769345 and 82824255
216 : 80422335 and 82977345
217 : 71015260 and 85458596
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218 : 83135650 and 85603550
219 : 79324875 and 87133365
220 : 74386305 and 87354495
221 : 78088504 and 88110536
222 : 84591405 and 89590995
223 : 89477984 and 92143456
224 : 91996816 and 93259184
225 : 90437150 and 94372450
226 : 96304845 and 96747315
227 : 95629904 and 97580944
228 : 97041735 and 97945785
229 : 86158220 and 99188788
230 : 93837808 and 99899792
Run time  n = 100000000 is 20.0404704 secs
If you can do in less than 20 secs, you will get FULL points
Attach Friends.java, output of your program as a pdf file
Attach a word file, explaining why your method is fast
Friends.java ends
```