



UIL Computer Science Competition

State 2025

JUDGES PACKET - CONFIDENTIAL

I. Instructions

1. The attached printouts of the judge test data are provided for the reference of the contest director and programming judges. Additional copies may be made if needed for this purpose.
2. This packet must remain CONFIDENTIAL. Additional copies may be made and returned to schools when other confidential contest material is returned.

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Problem #1

60 Points

1. Aspen

Program Name: Aspen.java

Input File: None

Test Input File:
none

Test Output To Screen:

2025 UIL State Championships!
!2025 UIL State Championships
s!2025 UIL State Championship
ps!2025 UIL State Championshi
ips!2025 UIL State Champions
hips!2025 UIL State Champions
ships!2025 UIL State Champion
nships!2025 UIL State Champio
onships!2025 UIL State Champi
ionships!2025 UIL State Champ
pionships!2025 UIL State Cham
pionships!2025 UIL State Cha
mpionships!2025 UIL State Ch
ampionships!2025 UIL State Ch
ampionships!2025 UIL State C
Championships!2025 UIL State
Championships!2025 UIL State
e Championships!2025 UIL Stat
te Championships!2025 UIL Sta
ate Championships!2025 UIL S
tate Championships!2025 UIL S
State Championships!2025 UIL
State Championships!2025 UIL
L State Championships!2025 UI
IL State Championships!2025 U
UIL State Championships!2025
UIL State Championships!2025
5 UIL State Championships!202
25 UIL State Championships!20
025 UIL State Championships!2
025 UIL State Championships!

Problem #2
60 Points

2. Amelia

Program Name: Amelia.java

Input File: amelia.dat

Test Input File:

```
10
3
Benjamin Armstrong 10 11 82 89 95 9
Derrick Martin 8 11 70 80 90 11
Matthew Sheldon 10 11 92 93 94 11
2
William Armstrong 8 9 80 90 100 7
AppleBottom Jeans 6 9 70 85 100 8
5
William Armstrong 8 11 80 90 100 7
AppleBottom Jeans 6 11 70 85 100 8
Benjamin Armstrong 10 11 82 89 95 9
Derrick Martin 8 11 70 80 90 11
Matthew Sheldon 10 11 92 93 94 11
5
A A 11 11 90 91 92 1
B B 11 11 90 91 92 2
C C 11 11 90 91 92 2
D D 11 11 90 91 92 2
E E 11 11 90 91 92 3
5
A A 11 11 90 91 92 2
B B 11 11 90 98 92 2
C C 11 11 90 91 94 2
D D 11 11 90 91 95 2
E E 11 11 90 91 92 2
5
A A 11 11 90 85 80 2
B B 11 11 90 85 90 2
C C 11 11 90 85 85 2
D D 11 11 90 85 80 2
E E 11 11 90 85 82 2
```

~ *Input continues next column...* ~

~ *Continued from previous column...* ~

```
5
F F 11 11 30 60 90 2
B B 11 11 90 85 90 2
C C 11 11 90 85 85 2
D D 11 11 90 85 80 2
E E 11 11 90 85 82 2
15
A A 10 10 30 90 60 9
B B 9 10 10 50 100 9
C C 8 10 10 50 100 8
D D 10 10 30 40 100 15
E E 8 9 100 110 120 100
F F 10 10 30 60 90 10
G G 10 10 30 60 90 10
H H 10 10 30 60 90 100
I I 9 10 30 60 100 100
J J 10 11 40 60 140 140
K K 10 10 100 100 100 100
L L 10 10 0 100 200 212
M M 10 10 100 100 100 100
N M 11 11 212 212 10 10
N N 11 12 10 11 12 13
1
Free Willy 100 100 100 100 100 100
2
A B 100 100 100 100 100 100
B A 100 100 100 100 100 100
```

~ *Amelia output next page...* ~

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~ *Amelia continued* ~

Test Output To Screen:

Benjamin Armstrong 88.67
Matthew Sheldon 93.00
Derrick Martin 80.00

William Armstrong 90.00
AppleBottom Jeans 85.00

Benjamin Armstrong 88.67
Matthew Sheldon 93.00
Derrick Martin 80.00
William Armstrong 90.00
AppleBottom Jeans 85.00

E E 91.00
B B 91.00
C C 91.00
D D 91.00
A A 91.00

D D 92.00
C C 91.67
A A 91.00
B B 93.33
E E 91.00

B B 88.33
C C 86.67
E E 85.67
A A 85.00
D D 85.00

~ *Continues next column...* ~

~ *Continued from previous column...* ~

F F 60.00
B B 88.33
C C 86.67
E E 85.67
D D 85.00

L L 100.00
D D 56.67
H H 60.00
F F 60.00
G G 60.00
A A 60.00
K K 100.00
M M 100.00
N M 144.67
N N 11.00
J J 80.00
B B 53.33
I I 63.33
E E 110.00
C C 53.33

Free Willy 100.00

B A 100.00
A B 100.00

Problem #3
60 Points

3. Annabella

Program Name: Annabella.java

Input File: annabella.dat

Test Input File:

```
12
2 10 UV
1.0 1.2 1.3 1.4
1.0 1.5 1.4 1.3
3 50 LED
2.0 2.0 2.1 1.9
3.0 1.6 1.7 1.9
4.0 1.2 1.3 1.9
5 212 No Light
2.0 2.0 2.0 2.0
2.0 2.0 2.0 1.0
2.0 2.0 2.0 3.0
2.0 3.0 3.0 2.0
2.0 3.0 3.0 3.0
5 212 No Light
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 3.0 3.0 2.0
2.0 3.0 3.0 1.0
5 212000 UV
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 3.0 3.0 2.0
2.0 3.0 3.0 1.0
5 212000 No Light
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 3.0 3.0 2.0
2.0 3.0 3.0 1.0
5 212000 LED
```

~ *Input continues next column...* ~

~ *Continued from previous column...* ~

```
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 2.0 2.0 1.0
2.0 3.0 3.0 2.0
2.0 3.0 3.0 1.0
2 1000000 UV
1.0 1.2 1.2 1.2
1.0 1.3 1.3 1.3
2 1000000 UV
1.0 1.1 1.1 1.11
1.0 1.1 1.11 1.2
2 1000000 No Light
1.0 1.1 1.1 1.11
1.0 1.1 1.11 1.2
2 1000000 LED
1.0 1.1 1.1 1.11
1.0 1.1 1.11 1.2
1 10 LED
15.0 1.0 1.0 1.0
```

Test Output To Screen:

```
5
4
4
7
10
17
10
53
138
76
130
0
```

Problem #4
60 Points

4. Guillermo

Program Name: Guillermo.java

Input File: guillermo.dat

Test Input File:

```
10
3
{
  "timezone": "+02:00",
  "availability": [("09:00", "12:00"), ("14:00", "18:00")]
},
{
  "timezone": "-04:00",
  "availability": [("08:00", "11:00"), ("13:00", "16:00")]
},
{
  "timezone": "+00:00",
  "availability": [("13:00", "17:00")]
}
1
{
  "timezone": "+00:00",
  "availability": [("00:00", "23:00")]
}
2
{
  "timezone": "+02:00",
  "availability": [("09:00", "10:00")]
},
{
  "timezone": "-02:00",
  "availability": [("20:00", "21:00")]
}
2
{
  "timezone": "+00:00",
  "availability": [("22:00", "02:00")]
},
{
  "timezone": "+00:00",
  "availability": [("23:00", "03:00")]
}
2
{
  "timezone": "+00:00",
  "availability": [("08:00", "09:00")]
},
{
  "timezone": "+00:00",
  "availability": [("08:00", "09:00")]
}
}
```

~ *Input continues next page...* ~

~ **Guillermo** *input continued...* ~

```

2
{
  "timezone": "+05:30",
  "availability": [("10:00", "12:00")]
},
{
  "timezone": "-03:00",
  "availability": [("00:00", "02:00")]
}
3
{
  "timezone": "+01:00",
  "availability": [("08:00", "09:30"), ("15:00", "17:00")]
},
{
  "timezone": "+01:00",
  "availability": [("07:30", "08:30"), ("16:00", "18:00")]
},
{
  "timezone": "+01:00",
  "availability": [("08:00", "10:00"), ("16:30", "17:30")]
}
2
{
  "timezone": "+00:00",
  "availability": [("12:00", "14:00")]
},
{
  "timezone": "+00:00",
  "availability": [("13:00", "15:00")]
}
3
{
  "timezone": "+00:00",
  "availability": [("08:00", "12:00"), ("13:00", "18:00")]
},
{
  "timezone": "+00:00",
  "availability": [("10:00", "14:00")]
},
{
  "timezone": "+00:00",
  "availability": [("11:00", "15:00")]
}
4
{
  "timezone": "+02:00",
  "availability": [("09:00", "11:00")]
},
{
  "timezone": "+00:00",
  "availability": [("07:00", "10:00")]
},
{
  "timezone": "-01:00",
  "availability": [("06:00", "08:00")]
},
{
  "timezone": "+03:00",
  "availability": [("12:00", "14:00")]
}

```

~ **Guillermo** *output next page...* ~

~ Guillermo *continued...* ~

Test Output To Screen:

```
13:00-14:00
00:00-01:00
The fries are in the bag.
00:00-01:00
08:00-09:00
The fries are in the bag.
The fries are in the bag.
13:00-14:00
11:00-12:00
The fries are in the bag.
```

Problem #5
60 Points

5. Heidi

Program Name: Heidi.java

Input File: heidi.dat

Test Input File: (Indented lines are continuation of previous line)

```

15
3 50
60 100 120
10 20 30
4 60
40 100 50 60
20 10 40 30
5 100
10 25 30 40 50
30 40 50 60 70
100 500
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200
100 200
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200
100 750
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200

```

~ Input continues next page... ~

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~ Heidi Input continued from previous page... ~

```
1 100
100
100
5 5
1 2 3 4 5
6 7 8 9 9
100 999
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200
100 1000
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200
100 958
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200
100 913
256 260 267 268 269 270 273 275 279 280 282 291 293 296 297 298 299 300 308 314
    315 316 317 319 320 333 336 337 348 353 354 355 356 103 104 362 108 109
    111 112 369 114 115 371 373 376 378 123 125 382 127 386 131 388 133 390
    136 392 394 138 139 142 144 147 150 157 162 168 169 175 176 177 179 186
    187 192 194 196 197 198 200 202 206 212 213 219 222 224 225 226 227 229
    237 239 240 242 244 245 250 254
1 4 8 10 16 17 18 21 22 24 25 27 29 30 31 36 41 43 44 46 49 50 51 57 58 59 60 61
    63 64 66 69 71 73 75 76 77 79 84 85 86 87 92 96 97 102 103 106 109 110 112
    113 114 115 116 117 118 121 122 123 124 125 126 128 129 130 131 132 135
    136 140 141 142 144 145 146 147 148 149 152 157 158 159 160 161 163 168
    172 174 178 179 180 185 186 188 192 193 194 198 200
```

~ Input continues next page... ~

~ Heidi *continued...* ~

~ Input *continued from previous page...* ~

```
10 20
1 2 3 4 5 6 7 8 9 10
1 2 3 4 6 6 7 9 9 10
10 25
1 2 3 4 5 6 7 8 9 10
1 2 3 4 6 6 7 9 9 10
10 15
1 2 3 4 5 6 7 8 9 10
1 2 3 4 6 6 7 9 9 10
```

Test Output To Screen:

```
220: 2 3
200: 1 2 4
65: 2 4
5691: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 22
3287: 1 2 3 4 5 6 7 8 9 11 12 15
7070: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 27 28 30 31
100: 1
0: None
8432: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22 23 28 29 30 31 32 36
8433: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 21 22 26 27 29 30 31 32 33
8351: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 27 28 29 30 31
8049: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 26 29 30 31 32
20: 1 2 4 6 7
25: 1 2 3 4 6 9
15: 2 3 4 6
```

Problem #6
60 Points

6. Holden

Program Name: Holden.java

Input File: holden.dat

Test Input File:

```
20 15 9
Ceres -1334.29 -1239.23 -12.43
Europa 2489.29 1948.01 39.23
Medina 2000.02 -1212.12 -1.34
Ganymede -843.23 999.99 123.43
A 0 0 0
B 3 0 0
C 3 2 0
D 4 0 0
E 8 0 0
Titan -2019.19 1678.78 -345.22
Io 1463.84 -1876.36 1111.11
Polaris 123456.78 -938474.02 555555.55
Enceladus -987.32 -829.11 888.88
F 10 10 10
G -10 -10 -10
Medina Europa
Ganymede Europa
Io Titan
Ganymede Enceladus
Titan Europa
Ceres Titan
Io Medina
C E
D C
Ceres Medina 6500
Europa Medina 2000
Ganymede Europa 7500
A E 9
A G 18
A F 18
F G 34
F G 35
F G 33
Enceladus Polaris 70000
Enceladus Polaris 1090000
Enceladus Polaris 1100000
Ceres Titan 30000
Io Medina 35000
Io Polaris 1095220
Ceres Polaris 1095220
Ganymede Enceladus 20000
A Europa 5000
B G 20
Enceladus Io 4000
```

Test Output To Screen:

```
3,334.44
Stuck in the Slow Zone.
4,458.85
8.00
17.32
17.32
Stuck in the Slow Zone.
34.64
Stuck in the Slow Zone.
Stuck in the Slow Zone.
Stuck in the Slow Zone.
1,096,503.27
3,732.86
4,953.80
1,095,219.65
Stuck in the Slow Zone.
2,876.27
3,161.15
19.21
2,674.75
```

Problem #7
60 Points

7. Liza

Program Name: Liza.java

Input File: liza.dat

Test Input File:

70
3.84
3.50
3.94
4.02
4.90
4.56
4.72
4.24
5.90
10.34
15
25
10
9
8
7
6
5
6.34
6.78
6.55
5.07
5.17

~ Continued from prev column... ~

5.24
5.39
5.33
5.85
5.64
5.91
6.89
6.17
6.02
7.89
7.43
7.54
7.73
7.09
7.12
8.88
8.98
8.54
9.53
9.35
9.09
9.87
9.64
9.71

~ Continued from prev column... ~

2.50
8.18
8.19
10.98
11.34
12.45
10.12
13.29
14.76
15.13
16.38
16.99
17.24
1
2
3
4
3.52
3.78
3.34
3.12
4.78
4.99

~ Input continues next column... ~

~ Input continues next column... ~

Test Output To Screen: (Indented lines are continuation of previous line)

Banana Small Yogurt Cup with Sprinkles
Vanilla Small Yogurt Cup with Chocolate Chips
Chocolate Small Yogurt Cup with Caramel, Chocolate Small Yogurt Cup with
Chocolate Chips and Sprinkles, Strawberry Small Yogurt Cup with Chocolate
Chips
Cake Batter Small Yogurt Cup, Vanilla Small Yogurt Cup with Gummy Bears
Banana Small Yogurt Cup with Caramel and Chocolate Chips and Sprinkles, Banana
Small Yogurt Cup with M&Ms, Vanilla Small Yogurt Cup with Caramel and M&Ms
and Sprinkles, Vanilla Small Yogurt Cup with Chocolate Chips and Hot Fudge
Chocolate Small Concrete with Caramel, Chocolate Small Yogurt Cup with M&Ms and
Sprinkles, Strawberry Small Yogurt Cup with Caramel and Chocolate Chips
and Sprinkles, Strawberry Small Yogurt Cup with M&Ms
Banana Small Yogurt Cup with Gummy Bears, Cake Batter Small Yogurt Cup with
Caramel and Sprinkles, Vanilla Small Concrete with Hot Fudge, Vanilla
Small Yogurt Cup with Caramel and Gummy Bears and Sprinkles, Vanilla Small
Yogurt Cup with Chocolate Chips and M&Ms
Banana Small Yogurt Cup with Chocolate Chips, Vanilla Small Yogurt Cup with
Caramel and Chocolate Chips and Sprinkles, Vanilla Small Yogurt Cup with
M&Ms

~ Output continues next page... ~

~ *Liza Output continued from previous page...* ~

Banana Small Yogurt Cup with Gummy Bears and M&Ms, Cake Batter Small Yogurt Cup with Caramel and M&Ms and Sprinkles, Cake Batter Small Yogurt Cup with Chocolate Chips and Hot Fudge, Vanilla Small Yogurt Cup with Chocolate Chips and Gummy Bears and Hot Fudge

Banana Large Yogurt Cup with Boba and Caramel, Banana Large Yogurt Cup with Boba and Chocolate Chips and Sprinkles, Banana Large Yogurt Cup with Cheesecake Bites and Sprinkles, Banana Large Yogurt Cup with Hot Fudge and M&Ms, Banana Medium Yogurt Cup with Boba and Cheesecake Bites and Sprinkles, Banana Medium Yogurt Cup with Boba and Hot Fudge and M&Ms, Cake Batter Large Yogurt Cup with Caramel and Chocolate Chips and M&Ms, Cake Batter Large Yogurt Cup with Gummy Bears and M&Ms and Sprinkles, Cake Batter Medium Yogurt Cup with Caramel and Cheesecake Bites and M&Ms, Vanilla Large Yogurt Cup with Boba and M&Ms and Sprinkles

Brownie Batter Large Yogurt Cup with Boba and Cheesecake Bites and Hot Fudge

Brownie Batter Large Yogurt Cup with Boba and Cheesecake Bites and Hot Fudge

Banana Large Yogurt Cup with Caramel and Chocolate Chips and M&Ms, Banana Large Yogurt Cup with Gummy Bears and M&Ms and Sprinkles, Banana Medium Yogurt Cup with Caramel and Cheesecake Bites and M&Ms, Cake Batter Large Yogurt Cup with Boba, Cake Batter Large Yogurt Cup with Caramel and Hot Fudge, Cake Batter Large Yogurt Cup with Chocolate Chips and Hot Fudge and Sprinkles, Cake Batter Medium Yogurt Cup with Boba and Caramel and Hot Fudge, Cake Batter Medium Yogurt Cup with Cheesecake Bites and Chocolate Chips and Gummy Bears, Cake Batter Medium Yogurt Cup with Cheesecake Bites and Hot Fudge and Sprinkles, Vanilla Large Yogurt Cup with Boba and Gummy Bears, Vanilla Large Yogurt Cup with Caramel and Gummy Bears and Hot Fudge, Vanilla Large Yogurt Cup with Cheesecake Bites and Chocolate Chips, Vanilla Medium Yogurt Cup with Boba and Cheesecake Bites and Chocolate Chips

Banana Large Yogurt Cup with M&Ms and Sprinkles, Banana Medium Yogurt Cup with Boba and M&Ms and Sprinkles, Cake Batter Large Yogurt Cup with Gummy Bears, Cake Batter Medium Yogurt Cup with Boba and Gummy Bears, Cake Batter Medium Yogurt Cup with Caramel and Gummy Bears and Hot Fudge, Cake Batter Medium Yogurt Cup with Cheesecake Bites and Chocolate Chips, Cake Batter Small Yogurt Cup with Boba and Cheesecake Bites and Chocolate Chips, Vanilla Large Yogurt Cup with Boba, Vanilla Large Yogurt Cup with Caramel and Hot Fudge, Vanilla Large Yogurt Cup with Chocolate Chips and Hot Fudge and Sprinkles, Vanilla Medium Yogurt Cup with Boba and Caramel and Hot Fudge, Vanilla Medium Yogurt Cup with Cheesecake Bites and Chocolate Chips and Gummy Bears, Vanilla Medium Yogurt Cup with Cheesecake Bites and Hot Fudge and Sprinkles

Banana Medium Yogurt Cup with Caramel and Chocolate Chips and M&Ms, Banana Medium Yogurt Cup with Gummy Bears and M&Ms and Sprinkles, Banana Small Yogurt Cup with Caramel and Cheesecake Bites and M&Ms, Cake Batter Large Concrete with Boba, Cake Batter Large Yogurt Cup, Cake Batter Medium Yogurt Cup with Boba, Cake Batter Medium Yogurt Cup with Caramel and Hot Fudge, Cake Batter Medium Yogurt Cup with Chocolate Chips and Hot Fudge and Sprinkles, Cake Batter Small Yogurt Cup with Boba and Caramel and Hot Fudge, Cake Batter Small Yogurt Cup with Cheesecake Bites and Chocolate Chips and Gummy Bears, Cake Batter Small Yogurt Cup with Cheesecake Bites and Hot Fudge and Sprinkles, Vanilla Large Yogurt Cup with Gummy Bears, Vanilla Medium Yogurt Cup with Boba and Gummy Bears, Vanilla Medium Yogurt Cup with Caramel and Gummy Bears and Hot Fudge, Vanilla Medium Yogurt Cup with Cheesecake Bites and Chocolate Chips, Vanilla Small Yogurt Cup with Boba and Cheesecake Bites and Chocolate Chips

~ *Output continues – see liza.out file for complete output (70 long lines total)...* ~

Problem #8
60 Points

8. Marshall

Program Name: Marshall.java

Input File: marshall.dat

Test Input File: (Indented lines are continuation of previous line)

```

20
27864 553645 6782
18 1 11 0 0 14 9 5 5 17 0 6 0 12 14 3 4 0 18 7 9 7 6 0 12 15 6 6 0 12 16 13 7 12 8 6 1 11 0 15
19 10 18 7 5 4 18 0 6 8 14 5 17 18 3 0 9 1 6 9 13 2 9 9 3 2 1 1 12 3 1 11 9 1 5 12 12 1
1 13 5 4 12 3 4 13 9 9 14 12 17 0 16 6 7 15 3 6 18 10 1 7 1 18 1 17 9 11 11 18 15 16 19
17 9 0 8 13 7 14 17 4 15 4 12 16 19 6 3 12 7 13 13 9 15 3 12 3 14 9 9 7 9 19 6 2 7 13
16 7 6 0 14 18 12 9 13 17 8 2 18 9 19 10 14 18 16 2 5 18 8 1 6 15 10 6 11 16 19 14 16 9
1 13 7 2 16 2 12 19 10 15 10 13 16 16 18 19 6 7 6 8 10 5 3 16 3 15 5 2 13 19 13 8 13 4
2 19 10 9 11 3 18 10 12 19 8 4 4 2 8 15 12 1 14 3 18 17 7 16 9 5 4 16 13 1 17 18 19 18
16 16 4 10 3 6 15 12 4 10 4 5 3 1 18 10 10 8 13 2 6 8 19 0 18 16 10 2 9 0 12 2 12 16 13
14 18 7 13 3 1 14 6 14 5 9 9 2 7 0 3 19 13 8 6 12 10 8 6 17 2 7 2 16 11 0 4 5 18 18 18
13 17 3 2 3 6 16 5 18 10 2 0 4 11 6 11 17 19 4 15 13 11 10 0 15 13 2 8 13 3 2 8 17 5 11
13 18 13 16 14 14 1 12 0 9 9 0 18 14 11 12 16 17 13 6 4 4 18 8 18 3 2 15 13 12 17 12 9
17 14 3 7 17 9 12 7 18 18 18 2 19 4 19 18 3 11 18 3 10 6 15 12 16 18 9 10 17 4 15 12 7
18 9 12 19 6 7 6 7 18 10 12 13 16 10 15 9 13 10 5 6 9 3 7 19 8 9 10 13 8 3 13 19 16 0 3
13 8 0 7 4 10 14 12 4 9 5 9 9 8 14 1 7 15 7 16 7 15 14 14 15 12 10 8 7 1 18 2 15 14 5
16 13 9 13 5 3 16 16 18 10 3 18 0 10 4 5 10 14 19 4 13 4 15 18 1 14 4 7 1 0 2 0 0 18 0
8 16 7 1 7 16 16 3 3 5 14 19 19 1 2 17 16 5 12 15 8 9 16 1 13 6 9 10 6 3 7 14 5 5 7 8 5
18 14 7 0 5 16 18 14 9 17 13 12 0 14 18 0 10 5 13 6 7 9 8 15 5 8 16 18 3 16 9 15 12 2 0
18 0 8 7 2 7 10 13 11 2 10 9 13 14 0 7 17 4 5 2 3 11 10 4 2 15 9 3 9 7 3 8 19 2 17 4 2
17 5 11 18 13 1 9 16 12 11 11 2 19 0 18 1 3 15 13 18 5 3 8 7 13 9 2 5 14 7 7 7 13 1 11
3 3 15 0 5 8 1 14 14 10 19 18 14 11 8 4 9 12 5 2 12 8 8 15 4 13 7 5 9 9 8 0 13 12 7 3 8
2 10 8 16 5 5 19 6 10 17 7 15 17 4 3 14 6 16 10 2 2 1 6 16 15 9 18 8 13 5 5 5 19 10 3 4
18 11 5 1 8 11 2 4 4 11 5 15 17 9 16 13 18 16 6 8 18 4 2 8 2 18 16 11 5 17 10 10 11 17
0 10 13 4 12 9 4 15 9 4 8 15 11 8 9 13 5 16 11 9 11 10 11 18 7 4 6 19 2 7 16 14 7 7 10
18 13 17 10 12 8 16 8 10 6 7 2 19 2 18 4 16 9 13 19 16 10 2 1 16 17 18 10 14 0 10 5 19
14 8 17 9 4 1 15 18 2 15 7 19 19 16 7 1 9 17 7 5 12 5 14 0 7 7 1 18 2 0 12 5 14 18 19
10 18 1 7 7 2 7 13 12 11 2 18 4 15 19 19 8 15 19 17 3 14 11 9 6 12 16 9 14 18 12 17 0 5
1 18 5 3 15 15 3 1 10 19 13 13 2 10 18 1 6 14 1 1 9 17 5 4 4 10 8 9 17 18 15 3 12 6 8
19 0 3 15 19 10 1 8 10 6 17 18 11 0 1 15 13 5 6 11 12 2 15 1 3 14 12 10 7 12 2 9 1 4 5
9 15 15 1 9 3 16 19 9 17 2 11 3 16 11 16 13 1 11 18 3 5 9 4 2 9 19 2 10 3 10 7 8 18 5
17 4 2 2 5 11 7 7 15 10 6 12 2 7 3 19 4 0 2 8 13 18 12 6 11 16 5 11 11 1 12 8 14 17 2
14 19 15 1 2 17 4 6 15 1 0 3 5 14 2 10 10 9 10 5 1 19 3 3 0 14 16 17 19 9 16 8 4 16 17
3 6 9 2 16 0 16 17 10 18 11 16 2 4 9 12 13 12 0 0 6 14 3 4 1 15 17 9 11 6 14 18 9 0 19
14 17 8 4 5 11 11 2 5 14 0 4 13 10 10 1 9 18 9 7 1 4 16 14 9 8 10 6 10 3 4 7 9 16 13 5
9 17 5 18 7 9 4 16 4 1 13 6 16 13 15 17 12 18 14 16 10 10 7 11 0 8 9 14 8 5 10 7 12 16
19 16 17 15 16 6 14 18 3 15 3 17 2 3 9 18 1 19 1 13 10 7 8 2 13 7 17 9 0 13 11 11 0 1 3
16 2 17 14 5 0 16 15 2 13 19 7 14 16 4 7 2 6 19 11 15 10 10 2 3 13 19 17 12 15 18 5 13
12 18 2 14 18 14 1 11 16 5 15 16 12 1 6 16 19 10 17 16 5 11 5 16 0 11 15 5 13 17 3 18 5
13 10 5 15 3 15 4 4 11 0 2 1 12 15 4 9 5 17 5 1 6 8 3 9 19 1 12 18 16 12 6 10 9 7 17 16
9 19 10 12 3 3 14 3 16 11 5 0 8 12 7 0 7 1 1 0 4 18 3 5 14 10 1 17 19 5 16 1 7 4 8 8 1
15 17 9 9 0 15 17 6 13 8 8 11 14 8 2 9 6 3 7 19 12 11 12 15 11 16 14 17 5 15 12 18 5 7
12 19 12 11 15 16 17 0 14 0 18 7 10 11 6 4 1 16 6 18 3 12 1 19 14 7 0 10 9 6 8 0 16 7 9
9 7 14 11 17 6 12 12 19 9 6 14 18 9 7 4 15 16 19 8 15 3 17 7 17 6 13 5 4 13 3 13 15 3
19 12 2 16 10 2 11 5 17 1 1 7 18 3 0 17 12 0 17 15 4 12 17 19 14 3 15 15 5 10 15 5 0 8
3 15 14 11 16 16 5 0 12 17 19 5 0 9 10 12 9 10 11 14 18 17 6 7 8 5 8 2 13 5 17 13 15 16
4 2 12 1 18 18 9 5 8 15 0 17 2 17 11 10 10 5 18 10 8 16 13 4 4 8 12 9 13 18 8 11 9 9 14
1 19 3 15 8 8 5 3 11 4 2 3 1 13 0 7 1 6 15 16 16 13 15 16 11 17 17 0 8 15 15 15 18 9 1
1 14 4 7 1 9 19 16 17 0 8 13 9 7 9 8 15 1 15 9 14 10 5 18 12 15 12 16 18 15 12 5 0 2 2
13 7 10 16 10 5 7 3 11 19 2 4 2 12 19 19 13 13 6 16 18 4 19 11 16 12 13 11 6 1 6 0 4 12
15 19 13 6 6 14 6 5 5 9 1 16 13 7 14 9 12 11 5 13 9 4 11 12 1 3 6 2 4 0 2 17 11 19 12
14 13 6 10 11 8

```

~ *Input continues...* ~

~ *Lines of input data are extremely long – view marshall.dat for complete input data!* ~

~ **Marshall** *continued...* ~

Test Output To Screen:

27864
90851
96484
86662
89109
45973
78093
13109
87271
72576
5675
57541
69263
54627
36985
32530
87507
90478
84712
52683

Problem #9
60 Points

9. Mitchell

Program Name: Mitchell.java

Input File: mitchell.dat

Test Input File:

```
2
100000 1000
"Id": 0, "type": directory, "name": root, "parentId": -1
"Id": 1, "type": file, "name": file_1.txt, "size": 65, "parentId": 0
"Id": 2, "type": file, "name": file_2.txt, "size": 640, "parentId": 0
"Id": 3, "type": file, "name": file_3.txt, "size": 379, "parentId": 0
"Id": 4, "type": file, "name": file_4.txt, "size": 45, "parentId": 0
```

Above are first 5 file/directory lines and below are first 5 Id lines...

File contains 2 test cases, each with 100000 file/directory lines followed by 1000 Id lines ...

View mitchell.dat for complete input data!

```
48263
94711
55811
62487
69951
```

~ Input continues in mitchell.dat... ~

Test Output To Screen:

932	<i>~ Continued from previous col... ~</i>	<i>~ Continued from previous col... ~</i>
987	832	153
542	0	4595
360	174	165
0	142	158
47	642	589
542	869	0
763	595	1956
214	674	484
465	170	855
522	558	1079
406	27	0
146	279	423
293	775	538
481	401	434
0	0	901
	645	463
<i>~ Output continues next column... ~</i>	<i>~ Output continues next column... ~</i>	607
		367

Above are first 50 output lines, complete output is 2000 lines...

View mitchell.out for complete output!

Problem #10
60 Points

10. Nate

Program Name: Nate.java

Input File: nate.dat

Test Input File:

```
1000
746.76,96.47
741.18,896.80
304.39,146.64
577.63,730.67
489.63,395.44
351.76,21.13
464.74,462.73
703.65,629.36
553.60,107.85
804.60,635.86
253.72,740.57
994.23,670.85
648.71,544.73
696.17,231.22
587.47,597.74
889.40,235.00
262.55,861.67
693.76,197.28
368.13,946.56
692.15,577.15
847.22,101.91
456.45,41.22
348.00,979.39
370.22,616.88
900.72,327.94
248.41,967.34
999.62,931.83
442.92,310.33
228.22,782.91
92.36,823.91
801.93,690.21
925.62,735.02
918.21,273.24
560.79,670.64
602.69,559.72
554.62,265.98
818.61,214.01
552.56,470.78
967.18,759.79
```

Test Output To Screen:

```
20,558.37 miles of road are required.
```

Above are first 40 lines of 1000 lines of data...
View nate.dat for complete input data!

Problem #11
60 Points

11. Wang

Program Name: Wang.java

Input File: wang.dat

Test Input File:

```
500
5 7
A B C D E
A B
D A
C B
E B
A E
D B
D E
16 3
A B C D E F G H I J K L M N O P
M G
I O
A I
3 2
A B C
C B
B C
25 97
A B C D E F G H I J K L M N O P Q R S T U V W X Y
R O
J Y
V O
V P
R T
V S
R X
V T
A D
A F
A G
A H
I D
A N
A O
M D
A R
A T
```

~ Input continues next columns... ~

```
~ Input continued... ~ ~ Input continued... ~
I K C I
U B K A
U A S B
Q G C Q
E U O E
M O C R
Q N O H
U L C S
I X O G
I Y K N
Y N G R
Q U C V
Y P G Q
U T O L
D A S H
H C G V
D K W E
L B O R
P A K V
D M S M
L G O S
D Q O X
T A W Y
P D J C
D S J B
P K B L
X C N A
P J N C
L N F K
L S B O
H V N B
H Y J H
L V R C
P W F Q
P V J L
T V F S
G A V B
C G J P
G D V G
```

~ Continues... ~

~ Continues... ~

*Above are first 3 test cases, only 118 lines data...
File contains > 2,000,000 lines of data...
View wang.dat for complete input data!*

~ Wang output next page... ~

~ Wang continued... ~

Test Output To Screen: (Indented lines are continuation of previous line)

```
{A}, {B}, {C}, {D}, {E}
{A}, {B}, {C}, {D}, {E}, {F}, {G}, {H}, {I}, {J}, {K}, {L}, {M}, {N}, {O}, {P}
{B, C}, {A}
{A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y}
{D, L, Q, S, X, Y, a, d, e, g}, {A}, {B}, {C}, {E}, {F}, {G}, {H}, {I}, {J}, {K}, {M},
    {N}, {O}, {P}, {R}, {T}, {U}, {V}, {W}, {Z}, {b}, {c}, {f}
{A, D}, {B}, {C}, {E}, {F}, {G}
{0}, {0B}, {1}, {1B}, {2}, {2B}, {3}, {4}, {5}, {6}, {7}, {8}, {9}, {A}, {AB}, {B}, {BB},
    {C}, {CB}, {D}, {DB}, {E}, {EB}, {F}, {FB}, {G}, {GB}, {H}, {HB}, {I}, {IB}, {J},
    {JB}, {K}, {KB}, {L}, {LB}, {M}, {MB}, {N}, {NB}, {O}, {OB}, {P}, {PB}, {Q}, {QB},
    {R}, {RB}, {S}, {SB}, {T}, {TB}, {U}, {UB}, {V}, {VB}, {W}, {WB}, {X}, {XB}, {Y},
    {YB}, {Z}, {ZB}, {a}, {aB}, {b}, {bB}, {c}, {cB}, {d}, {dB}, {e}, {eB}, {f}, {fB},
    {g}, {gB}, {h}, {hB}, {i}, {iB}, {j}, {jB}, {k}, {kB}, {l}, {lB}, {m}, {mB}, {n},
    {nB}, {o}, {oB}, {p}, {pB}, {q}, {qB}, {r}, {rB}, {s}, {sB}, {t}, {tB}, {u}, {uB},
    {v}, {vB}, {w}, {wB}, {x}, {xB}, {y}, {yB}, {z}, {zB}
{A, B, C, D, E, F, G, I, K, L, M, N, O, P, Q, R, T, U, V, W, Y, Z, a, b, c}, {H}, {J},
    {S}, {X}, {d}, {e}, {f}
{A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S}
{1, 2, 3, 4, 5, 6, 7, 9, AB, B, C, CB, D, DB, E, EB, FB, G, GB, H, I, IB, J, KB, L, LB,
    N, NB, O, OB, P, PB, Q, QB, R, RB, S, T, U, W, X, Y, Z, a, b, c, d, e, f, g, i, j,
    k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z}, {0}, {8}, {A}, {BB}, {F}, {HB},
    {JB}, {K}, {M}, {MB}, {V}, {h}
{5C, 7, 9, BC, FD, I, ND, WD, ZB, b, bB, fC, h, lB, mC, qB, sB, vB, y}, {0C, ED, ID, N,
    n}, {AC, TC, l, lC}, {7C, FB, q}, {4C, E, QC}, {LD, ZC, a}, {QB, rB}, {LB, u},
    {gC, xC}, {0}, {0B}, {1}, {1B}, {1C}, {2}, {2B}, {2C}, {3}, {3B}, {3C}, {4}, {4B},
    {5}, {5B}, {6}, {6B}, {6C}, {7B}, {8}, {8B}, {8C}, {9B}, {9C}, {A}, {AB}, {AD},
    {B}, {BB}, {BD}, {C}, {CB}, {CC}, {CD}, {D}, {DB}, {DC}, {DD}, {EB}, {EC}, {F},
    {FC}, {G}, {GB}, {GC}, {GD}, {H}, {HB}, {HC}, {HD}, {IB}, {IC}, {J}, {JB}, {JC},
    {JD}, {K}, {KB}, {KC}, {KD}, {L}, {LC}, {M}, {MB}, {MC}, {MD}, {NB}, {NC}, {O},
    {OB}, {OC}, {OD}, {P}, {PB}, {PC}, {PD}, {Q}, {QD}, {R}, {RB}, {RC}, {RD}, {S},
    {SB}, {SC}, {SD}, {T}, {TB}, {TD}, {U}, {UB}, {UD}, {V}, {VB}, {VC}, {VD},
    {W}, {WB}, {WC}, {X}, {XB}, {XC}, {Y}, {YB}, {YC}, {Z}, {aB}, {aC}, {bC}, {c},
    {cB}, {cC}, {d}, {dB}, {dC}, {e}, {eB}, {eC}, {f}, {fB}, {g}, {gB}, {hB}, {hC},
    {i}, {iB}, {iC}, {j}, {jB}, {jC}, {k}, {kB}, {kC}, {m}, {mB}, {nB}, {nC}, {o},
    {oB}, {oC}, {p}, {pB}, {pC}, {qC}, {r}, {rC}, {s}, {sC}, {t}, {tB}, {tC}, {uB},
    {uC}, {v}, {vC}, {w}, {wB}, {wC}, {x}, {xB}, {yB}, {yC}, {z}, {zB}, {zC}
{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, AB, B, BB, CB, DB, E, EB, FB, GB, H, HB, I, IB, J, JB, K,
    L, M, O, P, Q, R, S, U, W, X, Y, c, d, e, f, g, h, i, j, l, m, n, o, q, r, s, t,
    u, x, y, z}, {A}, {C}, {D}, {F}, {G}, {N}, {T}, {V}, {Z}, {a}, {b}, {k}, {p}, {v},
    {w}
{A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, a, b, c,
    d, e, f, g, h, i, j}
{2, B, QB, W, cB, hB, kB, mB, n}, {6B, MB}, {A, nB}, {7B, Q}, {0}, {0B}, {1}, {1B}, {2B},
    {3}, {3B}, {4}, {4B}, {5}, {5B}, {6}, {7}, {8}, {9}, {AB}, {BB}, {C}, {CB}, {D},
    {DB}, {E}, {EB}, {F}, {FB}, {G}, {GB}, {H}, {HB}, {I}, {IB}, {J}, {JB}, {K}, {KB},
    {L}, {LB}, {M}, {N}, {NB}, {O}, {OB}, {P}, {PB}, {R}, {RB}, {S}, {SB}, {T}, {TB},
    {U}, {UB}, {V}, {VB}, {WB}, {X}, {XB}, {Y}, {YB}, {Z}, {ZB}, {a}, {aB}, {b}, {bB},
    {c}, {d}, {dB}, {e}, {eB}, {f}, {fB}, {g}, {gB}, {h}, {i}, {iB}, {j}, {jB}, {k},
    {l}, {lB}, {m}, {o}, {oB}, {p}, {pB}, {q}, {qB}, {r}, {rB}, {s}, {sB}, {t}, {tB},
    {u}, {uB}, {v}, {vB}, {w}, {wB}, {x}, {xB}, {y}, {yB}, {z}, {zB}
```

Above are first 14 lines of output...

File contains 500 lines of output with some lines > 50,000 chars...

View wang.out for complete output data!

Problem #12
60 Points

12. Willson

Program Name: Willson.java

Input File: willson.dat

Test Input File:

```
3
42675
-121778.676026 86502.465723
-82395.076714 25180.349457
-33012.836775 -87963.525281
-65893.296143 -57136.120741
-27179.753795 26703.635348
-94465.684832 90152.135371
-40063.791901 53272.498163
-69690.408459 8430.654573
-121300.520232 -38002.659736
-47158.975208 40831.90006
-105076.762929 -116916.952779
-118958.637973 -121128.195119
-21117.667115 8946.03358
-91998.857958 -84775.976762
-92781.819642 75598.790476
-37692.055619 -105769.839271
-99433.123997 81259.482524
-109591.354649 4073.09128
-113241.531115 77247.634733
-60942.073978 -92472.938026
-92701.594634 -60655.440656
-105573.961413 20215.695493
-71328.816906 17693.28689
-47938.374067 -35761.098906
-66706.357563 -112029.513525
-49559.459809 40730.175669
-13736.474894 -36742.837559
-86764.329713 -77293.029856
-117965.96099 52926.414096
-45875.006502 33874.099177
-92533.158972 -30545.758205
-41655.392187 -5317.249375
-126759.629358 55380.023594
-85421.144384 -103344.609404
-88035.029965 -103977.376883
```

~ *Input/Output continues next column...* ~

```
~ Continued from previous column... ~
-73812.475061 -108830.048019
-120224.423982 85214.14106
-45730.404916 -5765.364972
-127786.583183 19992.712681
-121336.14849 17030.911224
-39476.294211 -74617.297534
-76679.075561 -102795.260838
-41105.365596 -62325.354639
-70865.526695 -48508.528731
-101234.685294 -34628.002223
-108643.888697 -29539.079877
-64346.538319 65841.111744
-124759.409809 39968.594152
-83288.117431 -73529.657403
-26725.186364 -84430.875539
-127692.106871 -38647.037064
-108507.518468 37558.782655
-126445.363551 -46016.834014
-61154.369253 17504.765058
-94850.101451 -78584.978758
-63589.867832 -44801.731255
-57246.072201 -27600.542247
-48546.38872 35497.512336
-67569.544257 4157.554467
-121796.735867 32437.303589
-36367.912979 25858.696343
-105354.540486 -119748.158792
-123258.477296 83569.043897
-82921.514941 -70714.42261
-102352.306893 -41688.203202
-124738.524278 66303.417156
-31971.631647 -81096.146078
-78237.627567 21168.870232
-41465.088147 -26394.592226
-122839.783836 -99733.70068
-56903.426643 42484.491411
-39423.957528 -103328.699611
-55774.870855 -19736.374588
```

Above are first 75 lines of input data...
File contains > 1,000,000 lines of data...
View willson.dat for complete input data!

Test Output To Screen:

```
235885.8720
236401.9245
163924.8917
```