```
CS 4200 Project 1
Select:
[1] Single Test Puzzle
[2] Multi-Test Puzzle
[3] Exit
Select Input Method:
[1] Random
[2] File
Enter Solution Depth (2-20):
12
Puzzle:
1 5 4
7 6 2
0 3 8
Select H Function:
[1] H1
[2] H2
Solution Found
Step: 1
1 5 4
7 6 2
3 0 8
Step: 2
1 5 4
7 0 2
3 6 8
Step: 3
1 5 4
0 7 2
3 6 8
Step: 4
1 5 4
3 7 2
0 6 8
Step: 5
1 5 4
```

```
3 7 2
6 0 8
```

Step: 6

1 5 4

3 0 2

6 7 8

Step: 7

1 0 4

3 5 2

6 7 8

Step: 8

1 4 0

3 5 2

6 7 8

Step: 9

1 4 2

3 5 0

6 7 8

Step: 10

1 4 2

3 0 5

6 7 8

Step: 11

1 0 2

3 4 5

6 7 8

Step: 12

0 1 2

3 4 5

6 7 8

H1 Search Cost: 203

H2 Search Cost: 2343 H1 Time:

H2 Time:

Select:

```
[1] Single Test Puzzle
[2] Multi-Test Puzzle
[3] Exit
Select Input Method:
[1] Random
[2] File
1
Enter Solution Depth (2-20):
16
Puzzle:
0 3 5
6 2 4
7 8 1
Select H Function:
[1] H1
[2] H2
1
Solution Found
Step: 1
3 0 5
6 2 4
7 8 1
Step: 2
3 2 5
6 0 4
7 8 1
Step: 3
3 2 5
6 4 0
7 8 1
Step: 4
3 2 5
6 4 1
7 8 0
Step: 5
3 2 5
6 4 1
7 0 8
```

```
Step: 6
```

3 2 5

6 4 1

0 7 8

Step: 7

3 2 5

0 4 1

6 7 8

Step: 8

3 2 5

4 0 1

6 7 8

Step: 9

3 2 5

4 1 0

6 7 8

Step: 10

3 2 0

4 1 5

6 7 8

Step: 11

3 0 2

4 1 5

6 7 8

Step: 12

3 1 2

4 0 5

6 7 8

Step: 13

3 1 2

0 4 5

6 7 8

Step: 14

0 1 2

3 4 5

```
Search Cost: 416
Select:
[1] Single Test Puzzle
[2] Multi-Test Puzzle
[3] Exit
1
Select Input Method:
[1] Random
[2] File
1
Enter Solution Depth (2-20):
20
Puzzle:
3 6 2
7 1 5
8 4 0
Select H Function:
[1] H1
[2] H2
2
Solution Found
Step: 1
3 6 2
7 1 5
8 0 4
Step: 2
3 6 2
7 1 5
0 8 4
Step: 3
3 6 2
0 1 5
7 8 4
Step: 4
0 6 2
3 1 5
```

6 7 8

7 8 4

Step: 5

6 0 2

3 1 5

7 8 4

Step: 6

6 1 2

3 0 5

7 8 4

Step: 7

6 1 2

0 3 5

7 8 4

Step: 8

0 1 2

6 3 5

7 8 4

Step: 9

1 0 2

6 3 5

7 8 4

Step: 10

1 2 0

6 3 5

7 8 4

Step: 11

1 2 5

6 3 0

7 8 4

Step: 12

1 2 5

6 3 4

7 8 0

Step: 13

1 2 5

6 3 4

7 0 8

```
Step: 14
```

1 2 5

6 3 4

0 7 8

Step: 15

1 2 5

0 3 4

6 7 8

Step: 16

1 2 5

3 0 4

6 7 8

Step: 17

1 2 5

3 4 0

6 7 8

Step: 18

1 2 0

3 4 5

6 7 8

Step: 19

1 0 2

3 4 5

6 7 8

Step: 20

0 1 2

3 4 5

6 7 8

Search Cost: 1451

Select:

[1] Single Test Puzzle

[2] Multi-Test Puzzle

[3] Exit