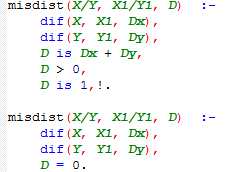
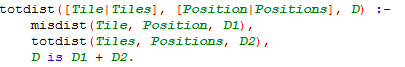
|  |  |  |  |
| --- | --- | --- | --- |
| Start1(N=) | Start2 | Start3 | Start4 |
| 41 | 173 | 2409 | 9508 |
| 173 | 1157 | 6189 | 28423 |
| 8915 | 1343 | 14814 |  |
| 9962 | 4496 |  |  |
| 10583 | 9810 |  |  |
| 10787 | 11361 |  |  |
| 11951 | 27965 |  |  |
| 12155 | 28263 |  |  |
| 27487 | 29447 |  |  |
| 27963 | 30875 |  |  |
| 29327 | 31524 |  |  |
| 33245 |  |  |  |
| 40257 |  |  |  |
| 40554 |  |  |  |
| 44773 |  |  |  |

Breadthfirst:  
  
A\*:

|  |  |  |  |
| --- | --- | --- | --- |
| Start1(N=) | Start2 | Start3 | Start4 |
| 6 | 11 | 19 | 61 |
| 19 | 68 | 58 | 175 |
|  | 69 | 169 | 177 |
|  | 140 | 174 | 538 |
|  |  | 182 |  |
|  |  | 490 |  |
|  |  | 500 |  |
|  |  | 501 |  |

A\* with Misplace Tiles heuristic:

Changed parts:

|  |  |  |  |
| --- | --- | --- | --- |
| Start1(N=) | Start2 | Start3 | Start4 |
| 20 | 34 | 768 | Run out of time |
| 55 | 350 |  |  |
|  | 359 |  |  |

Base on this result, the order from slowest to fastest is Start4, Start3, Start2, Start1.