Procedure Search(G, s, goal) return null
insert (s, s) into Frontier
for each arc (t, n) in G from s to t in
if goal(t) then return p
remove a path p from Frontier
while Frontier is not empty
or null if no solution paths are found
(b) Output: path from s to q.s.t. s ∈ S and goal(q)
S: set of start nodes
S: set of frontier nodes
A: graph with nodes and arcs
Inputs: G: Graph, s, goal
Analysis
Heuristic Search
Uninformed Search
Examples
Algorithm
Directed Graphs
Problem
State Space
Search Basics
Search
Generic Search Algorithm
Search Examples

Example 2

Uniform Tree
Heuristics Example
Example 2
Uniform Example
8-Puzzle
Grid Example
Search Examples
In cost in place in left

Heuristics Example
Consider the following equation:

\[ 176 \times 6 = x + x^2 + x^3 + \ldots + x^2 \]

Solve for \( x \).

\[ x = 1.35 \] is chosen as the solution for \( x \).

\[ 10 = x + x^2 + x^3 + \ldots + x^2 \]

<table>
<thead>
<tr>
<th>IDA*</th>
<th>(1.29) 764</th>
<th>(1.55) 17646</th>
<th>20</th>
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<tbody>
<tr>
<td></td>
<td>(1.28) 226</td>
<td>(1.87) 2410</td>
<td>16</td>
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<td></td>
<td>(1.19) 45</td>
<td>(1.92) 315</td>
<td>12</td>
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<td>(1.11) 14</td>
<td>(1.47) 42</td>
<td>8</td>
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<td>(1.17) 7</td>
<td>(1.36) 10</td>
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<td>States Visited (Effective BF)</td>
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**Search**

Experiment Avoiding Reverse Moves

\[ h_2 = \text{Manhattan Distance} \]

\[ h_1 = \text{misplaced tiles} \]