

COMP316

ALGORITHM REPORT

MAP 1

Best-First

```

+-----+
|               ...               |
|          XXXXXX      .X..      |
|          XXXXXXXX     .XX.      |
|             XXXX      .XG.      |
|             XXXX      .XXXX      |
|      XX               .. XXX      |
|     XXX               ...         |
|     XXS.....XXXXXXXXX          |
|     XXXXXX      XXX      X      |
|     XXX XXXXXXXXXXXX      XX      |
|             XXXXXX      X      |
|               |               |
+-----+

```

Expansions: 36 Cost: 28

*A**

```

+-----+
|               X               |
|          XXXXXX      X          |
|          XXXXXXXX     XX        |
|             XXXX      XG...      |
|             XXXX      XXXX.      |
|      XX               XXX.      |
|     XXX               .....      |
|     XXS.....XXXXXXXXX          |
|     XXXXXX      XXX      X      |
|     XXX XXXXXXXXXXXX      XX      |
|             XXXXXX      X      |
|               |               |
+-----+

```

Expansions: 130 Cost: 26

MAP 2

Best-First

```
+-----+
|
|          XXXXX
|         XXXXXXX
|        XXXXXXXXX
|       XXXXXXXXG.
|      XXXXX....
|     XXXXXXXXXX.
|    XXXXXXXXXXXX.
|   XXXXXXXXXXXXXX..
|  XXXXXXXX.....
| XXXXXXXXXXXXX.
| XXXXXXXXXXXX..
| XXXXXXXXXXXX.
| XXXXXXXXXXXX..
| XXXXXXXXX.
| ....X.....
|
| ..   ...
|
| .
|
| ...
|
| .
| ..   XXXXX
| .    XXXXXX
| .    XXXXXXX
| .    XXXXXX
| .    XXXXXXX
| .    XXXXXXX
| SXXXXXXXXX
| XXXXXXXXX
| XXXXXXXX
| XXXXXXXX
| XXXXXXXX
|
+-----+
```

Expansions: 47 Cost: 47

$$A^*$$

```

.....
.XXXXXX ..
.XXXXXXXXX ...
. XXXXXXXXXXXX.
.   XXXXXXXXXG
.       XXXXXX
.           XXXXXXXXXXXX
.   XXXXXXXXXXXXXX
. XXXXXXXXXXXXXXXX
.. XXXXXXXXX
.XXXXXXXXXXXXXX
..XXXXXXXXXXXXX
.XXXXXXXXXXXXXX
.XXXXXXXXXXXXXX
. XXXXXXXXXX
.      X
.
.
...
.
..     XXXXXX
.     XXXXXX
.     XXXXXXXX
.    XXXXXXXX
.   XXXXXXXX
SXXXXXXXXXX
XXXXXXX
XXXXXXX
XXXXXXXXX
XXXXXX
```

— — —

Expansions: 561 Cost: 45

— — —

MAP 3

Best-First

```
+-----+
|
|      XXXXXXXXXXXX
|      XXXXXXXXXXXX
|  XXXX      XXXX
|              XXXXX
|              XXXXX
|              XXXX
|              XXXX
|              XXXXX
|      XXXX      XXXXXG.....
|  SXXX      XXXXXXXXXXXXXXX..
|  .XXXX      XXXX      XXXXX.
|  .XXXXXX  XXXXXX      XXXXX.
|  ...XXXXXXX      XXXXX...
|      ....XXXXX      XXXX..
|              ..... XXXX..
|              .XXXX...
|              .....
+-----+
```

Expansions: 107 Cost: 50

A*

```
+-----+
|
|      XXXXXXXXXXXX
|      XXXXXXXXXXXX
|  XXXX      XXXX
|              XXXXX
|              XXXXX
|              XXXX
|              XXXX
|              XXXXX
|      XXXX      XXXXXG.....
|  SXXX      XXXXXXXXXXXXXXXX..
|  .XXXX      XXXX      XXXXX.
|  .XXXXXX  XXXXXX      XXXXX.
|  ...XXXXXXX      XXXXX...
|      ....XXXXX      XXXX..
|              ..... XXXX..
|              .XXXX...
|              .....
+-----+
```

Expansions: 337 Cost: 50

MY MAP

Best-First

```
+-----+
|      ...      |
|  XX   ..X..  .X.....X |
|   XX   .X X.  ..XX   X X XX... |
|    XX   .X X.  . X X X   X XXX. |
|      X .XXX... XXXXXXXXXXXX.... |
|      X .XXXXXXXXXXXXXXXXXXXX. |
|    SX   . XG..... |
|    .X .XXXXXXXXXXXXXXXXXXXX |
|   ...X .XXX   XXXXXXXXXXXX |
|   ..XX ..X X   X X X   X XXX |
|   ..XX .. X X   XX   X X XX |
|   .XX ..   X   X           X |
|   .... |
+-----+
```

Expansions: 243 Cost: 82

*A**

```
+-----+
|      X      X      X |
|   XX   X X   XX   X X XX |
|    XX   X X   X X X   X XXX |
|      X XXX   XXXXXXXXXXXX |
|      X XXXXXXXXXXXXXXXXXXXX |
|    SX   XG..... |
|    .X XXXXXXXXXXXXXXXXXXXX. |
|   ...X XXX   XXXXXXXXXXXX.... |
|   ..XX   X X   X X X   X XXX. |
|   ..XX   X X   XX   X X XX... |
|   .XX     X   X.....X |
|   .... |
+-----+
```

Expansions: 271 Cost: 62
