

2.

(a) The value list of $V^*(s)$ is shown below:

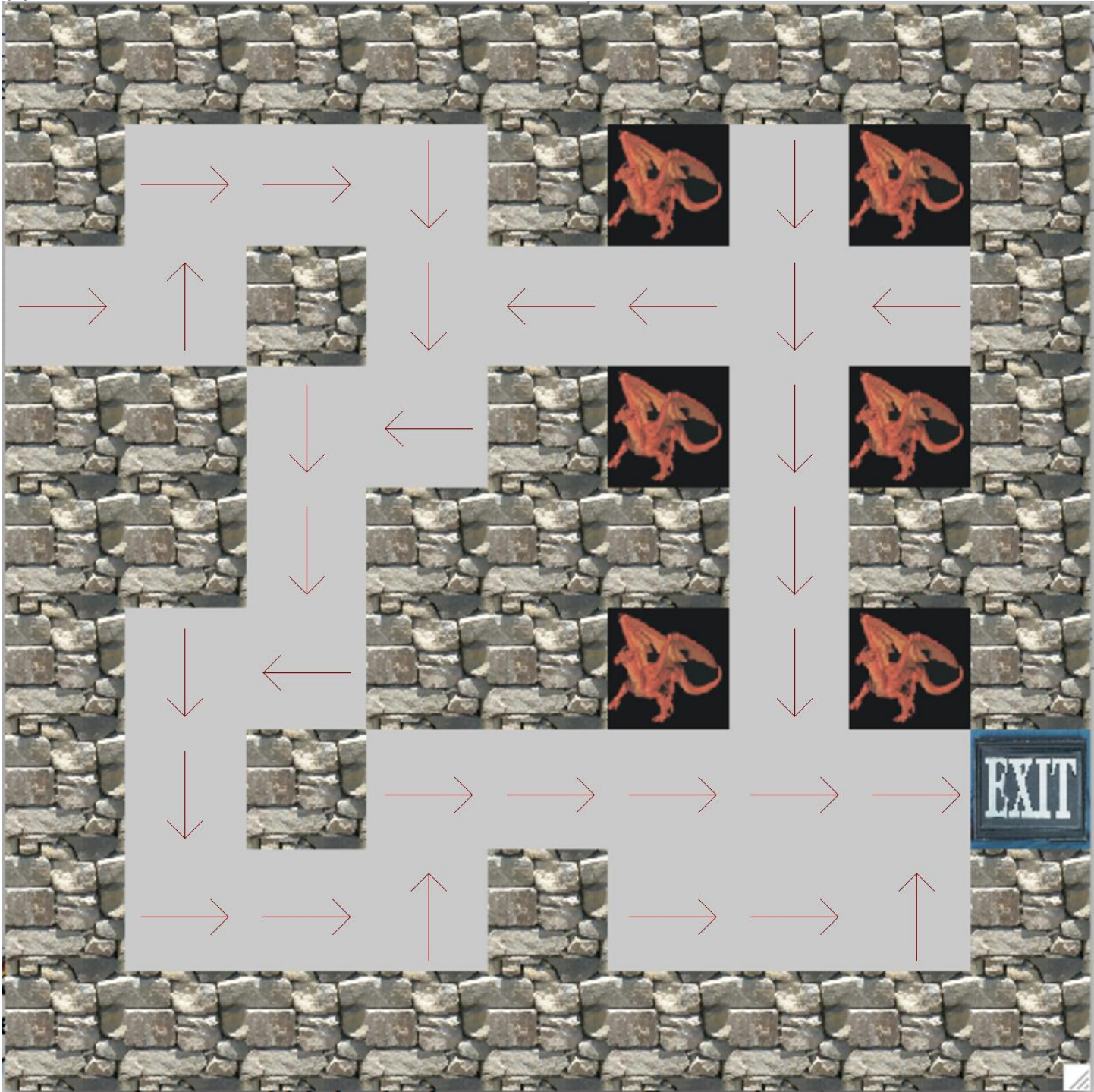
$V(3) = 71.394213900262173,$
 $V(11) = 72.983050137169926,$
 $V(12) = 72.173839772438029,$
 $V(15) = 79.828078124075688,$
 $V(16) = 80.723740387003275,$
 $V(17) = 81.629451878503005,$
 $V(20) = 73.801896668801092,$
 $V(22) = 77.200256907244324,$
 $V(23) = 78.066455962077924,$
 $V(24) = 78.942353575718414,$
 $V(26) = 82.545325350152467,$
 $V(29) = 74.629945450442733,$
 $V(30) = 75.46728524328195,$
 $V(31) = 76.342925112169837,$
 $V(34) = 84.408015578237283,$
 $V(35) = 83.471474818225872,$
 $V(39) = 74.397792548896234,$
 $V(43) = 85.355064219303074,$
 $V(47) = -99.999971634405,$
 $V(48) = 64.886287227465203,$
 $V(49) = -99.999971634405,$
 $V(51) = -99.999971634405,$
 $V(52) = 86.312738638656356,$
 $V(53) = 90.519007743457593,$
 $V(56) = 59.66755141316019,$
 $V(57) = 68.949798850127252,$
 $V(58) = 70.31429937981747,$
 $V(59) = 80.325187732396827,$
 $V(60) = 81.472904470173503,$
 $V(61) = 92.202953763574044,$
 $V(62) = 91.621159538199478,$
 $V(65) = -99.999971634405,$
 $V(66) = 59.66755141316019,$
 $V(67) = -99.999971634405,$
 $V(69) = -99.999971634405,$
 $V(70) = 93.67473182161109,$
 $V(71) = 92.635727612324672,$
 $V(79) = 99.999971634405.$

The puzzle is a 10x10 grid with a stone wall background. The grid contains red arrows indicating movement directions, red dragon icons representing obstacles, and a blue 'EXIT' sign in the bottom right corner. The path starts at the top left and leads to the exit.

Grid Content:

- Row 1:** (1,1) Start, (1,2) →, (1,3) →, (1,4) ↓, (1,5) Dragon, (1,6) ↓, (1,7) Dragon, (1,8) Dragon, (1,9) Dragon, (1,10) Dragon.
- Row 2:** (2,1) →, (2,2) ↑, (2,3) Dragon, (2,4) ↓, (2,5) ←, (2,6) ←, (2,7) ↓, (2,8) ←, (2,9) Dragon, (2,10) Dragon.
- Row 3:** (3,1) Dragon, (3,2) ↓, (3,3) ←, (3,4) Dragon, (3,5) ↓, (3,6) Dragon, (3,7) Dragon, (3,8) Dragon, (3,9) Dragon, (3,10) Dragon.
- Row 4:** (4,1) Dragon, (4,2) ↓, (4,3) ↓, (4,4) Dragon, (4,5) ↓, (4,6) Dragon, (4,7) Dragon, (4,8) Dragon, (4,9) Dragon, (4,10) Dragon.
- Row 5:** (5,1) Dragon, (5,2) ↓, (5,3) ←, (5,4) Dragon, (5,5) ↓, (5,6) Dragon, (5,7) Dragon, (5,8) Dragon, (5,9) Dragon, (5,10) Dragon.
- Row 6:** (6,1) Dragon, (6,2) ↓, (6,3) ↓, (6,4) Dragon, (6,5) ↓, (6,6) Dragon, (6,7) Dragon, (6,8) Dragon, (6,9) Dragon, (6,10) Dragon.
- Row 7:** (7,1) Dragon, (7,2) ↓, (7,3) ↓, (7,4) Dragon, (7,5) ↓, (7,6) Dragon, (7,7) Dragon, (7,8) Dragon, (7,9) Dragon, (7,10) Dragon.
- Row 8:** (8,1) Dragon, (8,2) ↓, (8,3) ↓, (8,4) Dragon, (8,5) ↓, (8,6) Dragon, (8,7) Dragon, (8,8) Dragon, (8,9) Dragon, (8,10) Dragon.
- Row 9:** (9,1) Dragon, (9,2) ↓, (9,3) ↓, (9,4) Dragon, (9,5) ↓, (9,6) Dragon, (9,7) Dragon, (9,8) Dragon, (9,9) Dragon, (9,10) Dragon.
- Row 10:** (10,1) Dragon, (10,2) ↓, (10,3) ↓, (10,4) Dragon, (10,5) ↓, (10,6) Dragon, (10,7) Dragon, (10,8) Dragon, (10,9) Dragon, (10,10) Dragon.

Path: The path starts at (1,1) and follows the arrows to reach the 'EXIT' sign at (10,10).



The image shows a 10x10 grid-based puzzle game. The background is a stone wall texture. The grid contains various elements: red arrows indicating movement directions, red dragon-like creatures, and a blue 'EXIT' sign in the bottom right corner. The path starts from the top left and ends at the EXIT sign.

The grid layout is as follows (rows 0-9, columns 0-9):

- Row 0: (0,0) to (0,3) are grey squares with red arrows pointing right, right, right, and down respectively. (0,4) is a stone wall square. (0,5) is a grey square with a red dragon. (0,6) is a grey square with a red arrow pointing down. (0,7) is a stone wall square. (0,8) is a grey square with a red dragon. (0,9) is a stone wall square.
- Row 1: (1,0) is a grey square with a red arrow pointing right. (1,1) is a grey square with a red arrow pointing up. (1,2) is a stone wall square. (1,3) is a grey square with a red arrow pointing down. (1,4) is a grey square with a red arrow pointing left. (1,5) is a grey square with a red arrow pointing left. (1,6) is a grey square with a red arrow pointing down. (1,7) is a grey square with a red arrow pointing left. (1,8) is a stone wall square. (1,9) is a stone wall square.
- Row 2: (2,0) is a stone wall square. (2,1) is a stone wall square. (2,2) is a grey square with a red arrow pointing down. (2,3) is a grey square with a red arrow pointing left. (2,4) is a stone wall square. (2,5) is a grey square with a red dragon. (2,6) is a grey square with a red arrow pointing down. (2,7) is a stone wall square. (2,8) is a grey square with a red dragon. (2,9) is a stone wall square.
- Row 3: (3,0) is a stone wall square. (3,1) is a stone wall square. (3,2) is a grey square with a red arrow pointing down. (3,3) is a stone wall square. (3,4) is a stone wall square. (3,5) is a grey square with a red dragon. (3,6) is a grey square with a red arrow pointing down. (3,7) is a stone wall square. (3,8) is a grey square with a red dragon. (3,9) is a stone wall square.
- Row 4: (4,0) is a stone wall square. (4,1) is a stone wall square. (4,2) is a grey square with a red arrow pointing down. (4,3) is a grey square with a red arrow pointing left. (4,4) is a stone wall square. (4,5) is a grey square with a red dragon. (4,6) is a grey square with a red arrow pointing down. (4,7) is a stone wall square. (4,8) is a grey square with a red dragon. (4,9) is a stone wall square.
- Row 5: (5,0) is a stone wall square. (5,1) is a grey square with a red arrow pointing down. (5,2) is a grey square with a red arrow pointing left. (5,3) is a stone wall square. (5,4) is a stone wall square. (5,5) is a grey square with a red dragon. (5,6) is a grey square with a red arrow pointing down. (5,7) is a stone wall square. (5,8) is a grey square with a red dragon. (5,9) is a stone wall square.
- Row 6: (6,0) is a stone wall square. (6,1) is a grey square with a red arrow pointing down. (6,2) is a grey square with a red arrow pointing left. (6,3) is a stone wall square. (6,4) is a stone wall square. (6,5) is a grey square with a red dragon. (6,6) is a grey square with a red arrow pointing down. (6,7) is a stone wall square. (6,8) is a grey square with a red dragon. (6,9) is a stone wall square.
- Row 7: (7,0) is a stone wall square. (7,1) is a grey square with a red arrow pointing down. (7,2) is a grey square with a red arrow pointing left. (7,3) is a stone wall square. (7,4) is a stone wall square. (7,5) is a grey square with a red dragon. (7,6) is a grey square with a red arrow pointing down. (7,7) is a stone wall square. (7,8) is a grey square with a red dragon. (7,9) is a stone wall square.
- Row 8: (8,0) is a stone wall square. (8,1) is a grey square with a red arrow pointing down. (8,2) is a grey square with a red arrow pointing left. (8,3) is a stone wall square. (8,4) is a stone wall square. (8,5) is a grey square with a red dragon. (8,6) is a grey square with a red arrow pointing down. (8,7) is a stone wall square. (8,8) is a grey square with a red dragon. (8,9) is a stone wall square.
- Row 9: (9,0) is a stone wall square. (9,1) is a grey square with a red arrow pointing down. (9,2) is a grey square with a red arrow pointing left. (9,3) is a stone wall square. (9,4) is a stone wall square. (9,5) is a grey square with a red dragon. (9,6) is a grey square with a red arrow pointing down. (9,7) is a stone wall square. (9,8) is a grey square with a red dragon. (9,9) is a stone wall square.

The path starts from the top left and ends at the EXIT sign in the bottom right corner.