



(0,0)	(1,0) 	(2,0)	(3,0)
(0,1)	(1,1) B	(2,1)	(3,1)
(0,2)	(1,2) C	(2,2)	(3,2) A
(0,3) 	(1,3)	(2,3)	(3,3)



$$v_0 = \{(1, 0)\}$$

$$v_A = \emptyset$$

$$v_B = \emptyset$$

$$v_C = \emptyset$$

$$q = [((1, 0), [(1, 0)], 0)]$$

(0,0)	(1,0)	(2,0)	(3,0)
			
(0,1)	(1,1)	(2,1)	(3,1)
	B		
(0,2)	(1,2)	(2,2)	(3,2)
	C		A
(0,3)	(1,3)	(2,3)	(3,3)
			

$$c_1 = ((1, 0), [(1, 0)], 0)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \emptyset$$

$$v_B = \{(\underline{1}, 1)\}$$

$$v_C = \emptyset$$

$$q = [(\underline{1}, 1), [(1, 0), (1, 1)], B]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

A 4x4 grid with coordinates (i,j) at the top-left of each cell. The grid is divided into four 2x2 quadrants: top-left and bottom-left are gray, top-right and bottom-right are white. A blue circle is at (1,0). A red circle is at (0,3). The cell (1,1) is highlighted in yellow and contains a red letter 'B'. The cell (1,2) contains a red letter 'C'. The cell (3,2) contains a red letter 'A'. Dotted lines connect the blue circle to (1,1) and (1,2), and (1,1) to (2,1).

$$c_2 = ((1, 1), [(1, 0), (1, 1)], B)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \emptyset$$

$$v_B = \{(1, 1), (2, 1)\}$$

$$v_C = \emptyset$$

$$q = [(2, 1), [(1, 0), (1, 1)], (2, 1)], B]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

A 4x4 grid with coordinates (x,y) in the top-left corner of each cell. The grid is divided into four 2x2 quadrants, each with a gray background. A blue circle is in cell (1,0). A red circle is in cell (0,3). A yellow square is in cell (2,1). A red letter 'B' is in cell (1,1). A red letter 'C' is in cell (1,2). A red letter 'A' is in cell (3,2). A green dashed line connects the blue circle to the yellow square, passing through cell (1,1) and cell (2,1).

$$c_3 = ((2, 1), [(1, 0), (1, 1), (2, 1)], B)$$

\Downarrow

$$v_0 = \{(1, 0)\}$$

$$v_A = \emptyset$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = [(3, 1), [\dots, (2, 1), (3, 1)], B]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

$$c_4 = ((3, 1), [\dots, (2, 1), (3, 1)], B)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \{(3, 2)\}$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = [(3, 2), [\dots, (3, 1), (3, 2)], A]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

$$c_5 = ((3, 2), [\dots, (3, 1), (3, 2)], A)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \{(3, 2), (3, 3)\}$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = [((3, 3), [\dots, (3, 2), (3, 3)], A)]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

$$c_6 = ((3, 3), [\dots, (3, 2), (3, 3)], A)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \{(3, 2), (3, 3), (2, 3)\}$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = [(2, 3), [\dots, (3, 3), (2, 3)], A]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

$$c_7 = ((2, 3), [\dots, (3, 3), (2, 3)], A)$$

$$\Downarrow$$

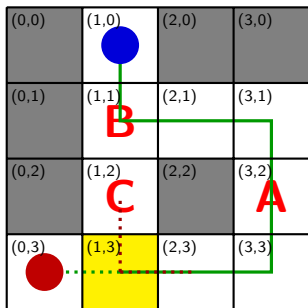
$$v_0 = \{(1, 0)\}$$

$$v_A = \{(3, 2), (3, 3), (2, 3), (1, 3)\}$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = [((1, 3), [\dots, (2, 3), (1, 3)], A)]$$



$$c_8 = ((1, 3), [\dots, (2, 3), (1, 3)], A)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \{\dots, (3, 3), (2, 3), (1, 3), (0, 3)\}$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = [(0, 3), [\dots, (1, 3), (0, 3)], A]$$

(0,0)	(1,0)	(2,0)	(3,0)
(0,1)	(1,1)	(2,1)	(3,1)
(0,2)	(1,2)	(2,2)	(3,2)
(0,3)	(1,3)	(2,3)	(3,3)

$$c_9 = ((0, 3), [\dots, (1, 3), (0, 3)], A)$$

$$\Downarrow$$

$$v_0 = \{(1, 0)\}$$

$$v_A = \{\dots, (3, 3), (2, 3), (1, 3), (0, 3)\}$$

$$v_B = \{(1, 1), (2, 1), (3, 1)\}$$

$$v_C = \emptyset$$

$$q = []$$