a)

2	3			2		3	
1	8	4	$\rightarrow$	1	8	4	$\rightarrow$
7	6	5		7	6	5	

	2	3		1	2	
1	8	4	$\rightarrow$		8	
7	6	5		7	6	
			I	J		

1	2	3
8		4
7	6	5

reached in 4 actions / 5 states, terminates at global minima.

b)

2	3	
1	7	4
8	6	5

2		3
1	7	4
8	6	5

	2	3
1	7	4
8	6	5

1	2	3
	7	4
8	6	5

1	2	3
8	7	4
	6	5

reached in 4 actions / 5 states and it does not terminate

Final state of termination is a local minimum.

It will always oscillate between 1 misplaced tile once local minimum is reached as nothing better.

5th action is where we check to terminate as no less than 2 misplaced tiles can be found.