

**Problem 1** Trace through the *Greedy Coloring* algorithm, which tries to color as many vertices (in order) RED, then when no more can be colored RED, it colors as many BLUE (in order) as possible, and keeps going to the next color until all vertices are colored. Use colors **R, B, G, Y, S, M, A, C**, in that order.

W	1	2	3	4	5	6	7	8	9
1		1		1	1		1	1	
2	1				1	1			1
3							1	1	
4	1						1	1	1
5	1	1						1	1
6		1							1
7	1		1	1				1	
8	1		1	1	1		1		1
9		1		1	1	1		1	

1	2	3	4	5	6	7	8	9

**Problem 2** Trace through the *Greedy Coloring* algorithm, which tries to color as many vertices (in order) RED, then when no more can be colored RED, it colors as many BLUE (in order) as possible, and keeps going to the next color until all vertices are colored. Use colors **R, B, G, Y, S, M, A, C**, in that order.

W	1	2	3	4	5	6	7	8
1				1		1		1
2			1		1		1	
3		1				1		1
4	1				1		1	
5		1		1				1
6	1		1				1	
7		1		1		1		
8	1		1		1			

1	2	3	4	5	6	7	8

**Problem 3** Trace through the *Greedy Coloring* algorithm, which tries to color as many vertices (in order) RED, then when no more can be colored RED, it colors as many BLUE (in order) as possible, and keeps going to the next color until all vertices are colored. Use colors **R, B, G, Y, S, M, A, C**, in that order.

W	1	2	3	4	5	6	7	8	9
1				1					
2			1			1			
3		1			1			1	
4	1					1	1		1
5			1			1	1	1	
6		1		1	1		1	1	1
7				1	1	1		1	
8			1		1	1	1		1
9				1		1		1	

1	2	3	4	5	6	7	8	9

**Problem 4** Trace through the *Greedy Coloring* algorithm, which tries to color as many vertices (in order) RED, then when no more can be colored RED, it colors as many BLUE (in order) as possible, and keeps going to the next color until all vertices are colored. Use colors **R, B, G, Y, S, M, A, C**, in that order.

W	1	2	3	4	5	6	7	8	9	10	11	12
1								1		1		1
2			1				1	1		1		
3		1			1							
4					1				1		1	
5			1	1								1
6							1	1				
7		1				1						
8	1	1				1					1	
9				1						1		1
10	1	1							1		1	
11				1				1		1		1
12	1				1				1		1	

[illegible]