

Math 1015 mastery checklist

Ranked voting		points	
		1	2
1	Plurality system		
2	Ranked choice voting		
3	Condorcet's method		
4	Borda count		
5	Condorcet Winner Criterion		
6	Manipulability		
7	Random dictator		
8	Approval voting		

Weighted voting			
9	Dummies, dictators, & veto power		
10	Shapley-Shubik power index		
11	Banzhaf power index		

Gerrymandering			
12	Determine possible outcomes		
13	Draw districts to achieve outcomes		
14	Efficiency gap		
15	Convex hull ratio		
16	Isoperimetric quotient		

Fair Division			
17	The Lone Divider method		
18	The Last Diminisher method		
19	The Selfridge-Conway method		

Graph theory			
20	Paths, degrees, connectedness		
21	"Imagine a graph" and answer questions		
22	Formal description of a graph		
23	Does an Euler circuit/path exist?		
24	Euler's sum-of-degrees theorem		
25	Draw an Euler circuit/path		
26	Draw a minimum duplication circuit/path		
27	Draw a Hamilton circuit, or say none exists		
28	TSP brute force		
29	TSP [repeated] nearest neighbor		
30	TSP sorted edges		
31	MST sorted edges		