

# Mock Output of Program

## Definitions:

- An **Instance** is one completion of sending 1 graph through all 5 algorithms
  - An **Instance Suite** results in the averaged values of *decisions\_made* and *successful\_colorings* for each algorithm from the repetition of one instance
- A **Run** is one completion of sending all 10 graphs (sizes 10 – 100) through all 5 algorithms
  - **Run Results** are the values of *decisions\_made* and *successful\_colorings* for each algorithm over 1 run
- A **Run Suite** is the repetition of many runs (ideally 100+)
  - **Suite Results** are the averaged values of *decisions\_made* and *successful\_colorings* from run results for each algorithm over 1 suite

## Desired Outputs

We want data from the instance suite and run suite because the suites will make our results be statistically valid. Let's start with a suite being 30 runs, but if we have time to run them overnight, have it be over 100 runs. Create output that we can put in tables such as:

Instance Suite Results for Graph of Size 10		
	Min Conflicts	
Suite Run #	Decisions Made	Successful Colorings
1	data goes here	data goes here
2	data goes here	data goes here
3	data goes here	data goes here
etc		
Total Values		
Average	data goes here	data goes here
Min	data goes here	data goes here
Max	data goes here	data goes here
	Simple Backtracking	
Suite Run #	Decisions Made	Successful Colorings
1	data goes here	data goes here
2	data goes here	data goes here
3	data goes here	data goes here
etc		
Total Values		
Average	data goes here	data goes here
Min	data goes here	data goes here
Max	data goes here	data goes here
	etc....	

Instance Suite Results for Graph of Size 20		
Min Conflicts		
Suite Run #	Decisions Made	Successful Colorings
	1 data goes here	data goes here
	2 data goes here	data goes here
	etc	
Total Values		
Average	data goes here	data goes here
Min	data goes here	data goes here
Max	data goes here	data goes here
Simple Backtracking		
Suite Run #	Decisions Made	Successful Colorings
	1 data goes here	data goes here
	2 data goes here	data goes here
	3 data goes here	data goes here
	etc	
Total Values		
Average	data goes here	data goes here
Min	data goes here	data goes here

Run Suite Results for Suite of size 100		
Min Conflicts		
Total Values	Decisions Made	Successful Colorings
Average	data goes here	data goes here
Min	data goes here	data goes here
Max	data goes here	data goes here
Simple Backtracking		
Total Values	Decisions Made	Successful Colorings
Average	data goes here	data goes here
Min	data goes here	data goes here
Max	data goes here	data goes here
Genetic Algorithm		
Total Values	Decisions Made	Successful Colorings
Average	data goes here	data goes here
Min	data goes here	data goes here
Max	data goes here	data goes here
	etc...	