

Homework 3: Constraint-Satisfaction Problems

Mark:2

Question 1. Consider the constraint graph of Figure 1

1. The depth of the tree generated by backtracking algorithm for this problem is?
2. Using backtracking with forward checking, Color the graph of Figure1, assume you can use the four colors: $\{red, green, yellow, blue\}$
 - Use the Minimum Remaining Values (MRV) heuristic to select variables. Ties are broken by variable number in increasing order.
 - Values are selected in the order specified above.

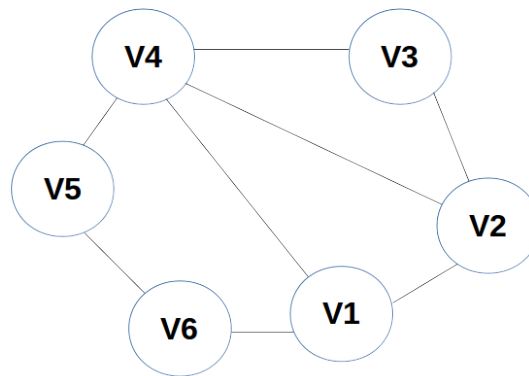


Figure 1: Constraint Graph

Question 2. Consider the constraint graph of Figure 2

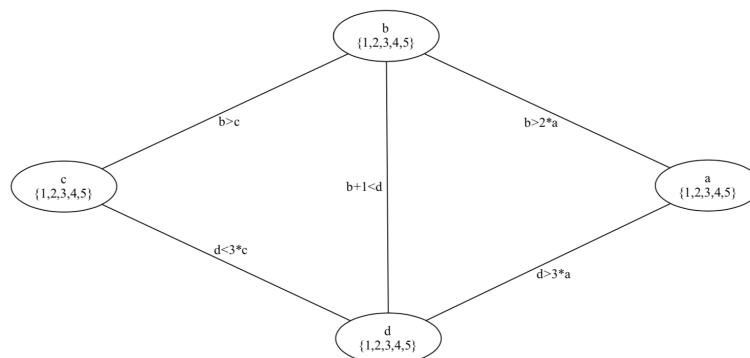


Figure 2: Constraint Graph

1. Trace Arc Consistency (AC3) algorithm on this graph.