

Assignment 15

C-13.2 Show that every language L in P is polynomial-time reducible to the language $M=\{5\}$, that is, the language that simply asks if the binary encoding of the input is equal to 5.

A. Show that the MST decision problem is polynomial-time reducible to the Subset Sum problem.

B. Show the shortest path decision problem is polynomial-time reducible to the MST decision problem. **Hint:** convert the shortest path problem to a decision problem, then reduce to MST problem.