

# REVIEW PAGE 6

## STUDYING / PRACTICE

### (1) CONCEPTS

READ, PRACTICE, REFLECT <sup>(AND DISCUSS)</sup> - LECTURE NOTES  
AND BOOKS

### (2) KNOW REDUCTIONS

INVENT INSTANCE EXAMPLES FOR A PROBLEM  
AND PRACTICE REDUCTIONS

### (3) NEW REDUCTIONS

PRACTICE NEW REDUCTIONS' EXERCISES:

PROBLEM:	REDUCE FROM:
INTEGER PROGRAMMING	3-CNF-SAT
HAMILTONIAN PATH	HAM-CYCLE
SET COVERING	VERTEX COVER

### (4) KNOWN APPROXIMATION ALGORITHMS

INVENT INSTANCES FOR A PROBLEM AND  
APPLY THE ALGORITHM TO THEM.

### (5) AND (6) BACKTRACKING AND BRANCH AND BOUND

PICK PROBLEM FROM LIST OF STUDIED PROBLEMS  
AND PRACTICE: STATE SPACE TREE, SIMULATION  
AND PSEUDOCODE SOLUTION

### (7) KNOWING PROBLEMS STUDIED EXAMPLES

PRACTICE BY SOLVING

PREPARE FOR (1)-(3)