

**Precept 4**

*These problems (or a subset of them) will be solved in precept.*

1. EXERCISE 5.4 in Kleinberg-Tardos. (*FFT and N-body*)

2. PROBLEM 16-1 in CLRS. (*coin changing*)

Design an  $\mathcal{O}(nk)$  time algorithm for making change for  $n$  cents using the fewest number of coins, where the available denominations are  $\{c_1, c_2, \dots, c_k\}$ . Assume that each coin denomination is an integer and that  $c_1 = 1$ .

3. EXERCISE 6.5 in Kleinberg-Tardos. (*word segmentation*)