

Today: Approximation algorithms; FPTAS for subset-sum. §§ 35.5

Next class: Synthesis and review.

Reminders: Term projects. Posters.

1. List the members of your group below. Underline your name.
2. Trace the execution of the textbook's EXACT-SUBSET-SUM algorithm (p. 1129), by enumerating the L_i lists it computes (after the pruning step), on the following instance:

$$\begin{aligned} S &= \{100, 103, 107, 109, 120, 135, 142, 163, 184, 203, 271\} \\ t &= 200 \end{aligned}$$

3. Repeat Question 2 using the textbook's APPROX-SUBSET-SUM FPTAS with $\epsilon = 0.66$.

$$S = \{100, 103, 107, 109, 120, 135, 142, 163, 184, 203, 271\}$$

$$t = 200$$

4. (informal homework) If the solution computed in Question 3 equals the one in Question 2 then determine the smallest change to the set S that would result in a different solution; else determine the smallest change that would result in the same solution.