

Consider the following pair of problems.

- SUBSETSUM: *Given a set S of n positive integers and an integer T , is there a subset of S that sum to T ?*
- PARTITION: *Given a set S of n positive integers, is there a way to partition S into two subsets S_1 and S_2 such that they have the same sum?*

(a) Describe a polynomial-time reduction from PARTITION to SUBSETSUM.

Note. *This is the easier reduction!*

(b) Describe a polynomial-time reduction from SUBSETSUM to PARTITION.

Rubric.

- This task will form part of the portfolio.
- Ensure that your argument is clear and keep reworking your solutions until your lab demonstrator is happy with your work.