

## The Problem

As a member of an archeology team, it is your task to check the security of one of the sites your team wants to excavate. The site is located 400 miles away from the base camp, across a desolate desert. The pickup truck you will use can carry 400 miles worth of fuel. In order to make the round trip to and from the site, you will need to make some partial trips to deposit fuel along the way to replenish what you need on the final trip. What is the most efficient trip you can plan and still have fuel to return to the base camp? The most efficient trip means that you should make the least number of partial trips possible and travel the least number of total miles.



## Strategies and Hints

1. Draw a picture to illustrate the problem.
2. Try various combinations of distances you go and the amounts you deposit.
3. Simplify the problem with smaller amounts.