

## The Table Problem



Name \_\_\_\_\_

Date \_\_\_\_\_

Thanksgiving dinner for 32 guests will be hosted at your home. You plan to rent square tables that seat 4 people. Each table costs \$10 to rent (chairs are free). So everyone can participate in the dinner conversation, all guests will be seated around one rectangular table.

1. Determine the least expensive way to seat all 32 guests.
2. Determine the most expensive way to seat all 32 guests without having any extra seats.
3. Compare the table arrangements. How does the shape of the table affect the rental cost?

Solve and justify using pictures, words, tables, graphs, and/or symbols.