

Table for Forty

Goal: Figure out all of the ways that forty guests can be seated according to the seating rules below. Find the area and perimeter of each table arrangement.

Seating Rules: Only one person can sit at each side of a square table. You may not leave any possible seats empty. Each side of the table is three feet long.

You will need:

- Paper
- Pencil, pen, markers, or crayons

What to do:

- Draw or make a list of all of the ways you can seat 40 people at square tables. Notice that the number of people who can sit at a table changes when the tables are pushed together or rearranged.

To Think About:

- What is the greatest number of tables that will seat forty guests according to the rules above? What is the smallest number of tables?
- Which seating arrangement would you choose? Why do you think this would be the best way to seat your guests?
- What is the area and perimeter of the table arrangements you designed?

Another Thing to Try:

- Create eight bedroom designs with different dimensions that have an area of exactly 120 square feet. What is the perimeter of each design? Which bedroom do you think you'd like best? Why?

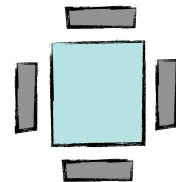


Table for Four

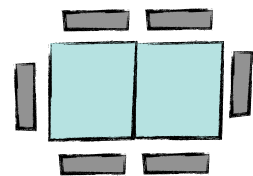


Table for Six

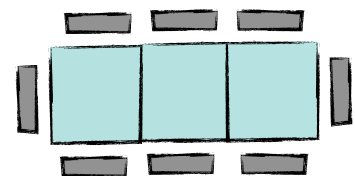


Table for Eight

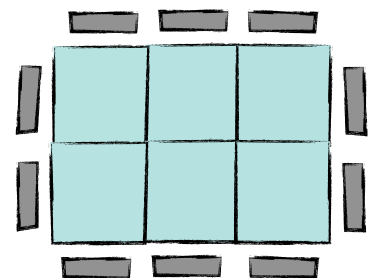


Table for Ten

