

## TABLE FOR EIGHT?

The prom committee met to discuss plans for decorating the gym. Raj, Erin, Marco and Wendy had the responsibility of getting enough card tables and chairs to seat everyone. The committee decided to use one table for four people. If more than two couples wanted to sit as a group, they would put tables together. Two tables together would seat six people. Three tables together would seat eight, and so on.

"How are the ticket sales going?" asked Raj.

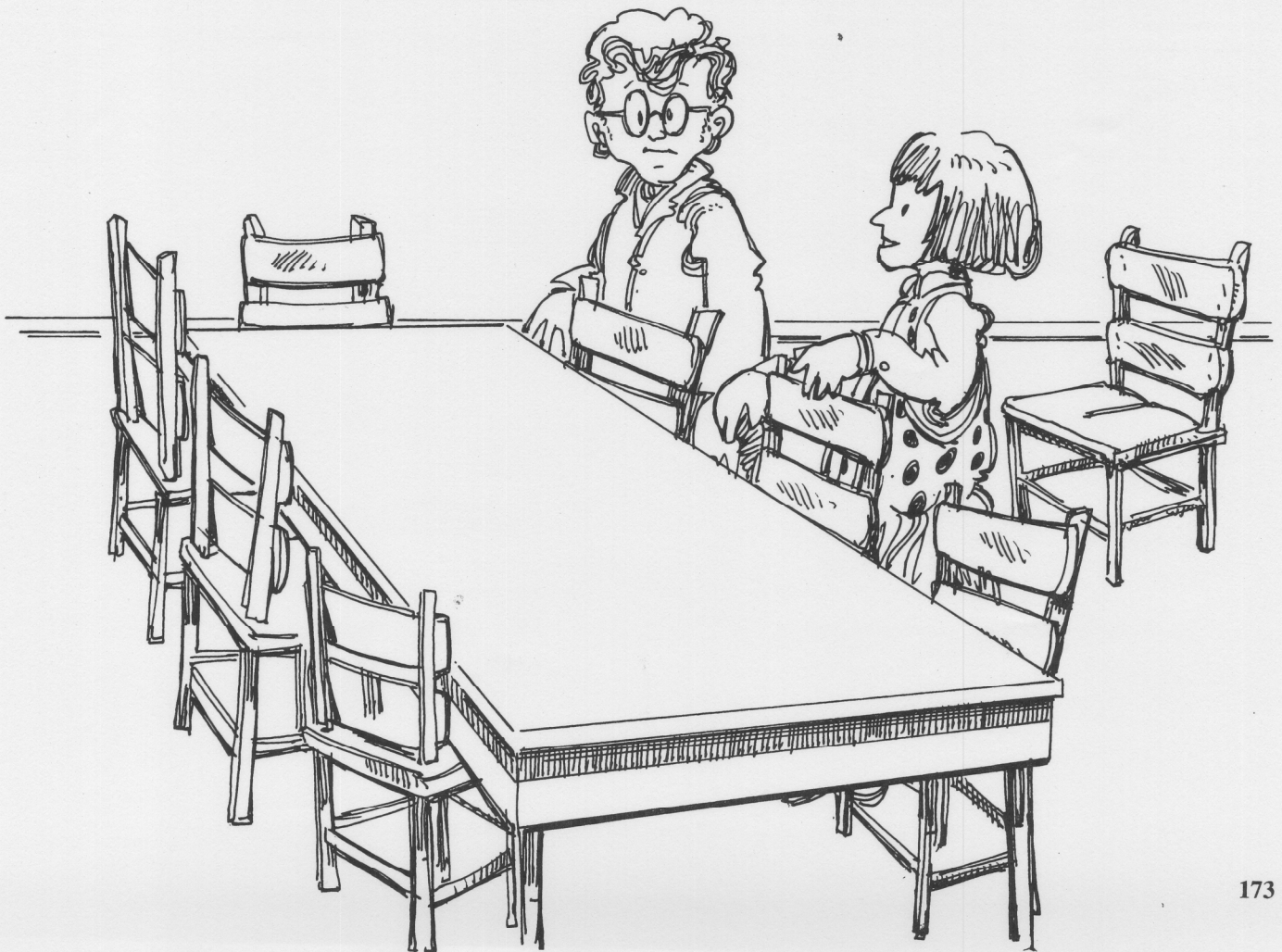
"Well, one ticket represents two people. So far we've sold 90 tickets. I think we should plan for 120 tickets to be sold," answered Marilyn, the ticket chairperson.

"Let's not make tables for more than 12 people," suggested Erin. "I think the room will look nicer that way," she added.

"And no table should have fewer than four people," said Wendy.

"When people pick up the tickets they can reserve a table. That will make it easiest to set up," added Marco.

"Start asking around to find tables and cloths. Sounds like we'll need quite a few," said Raj.

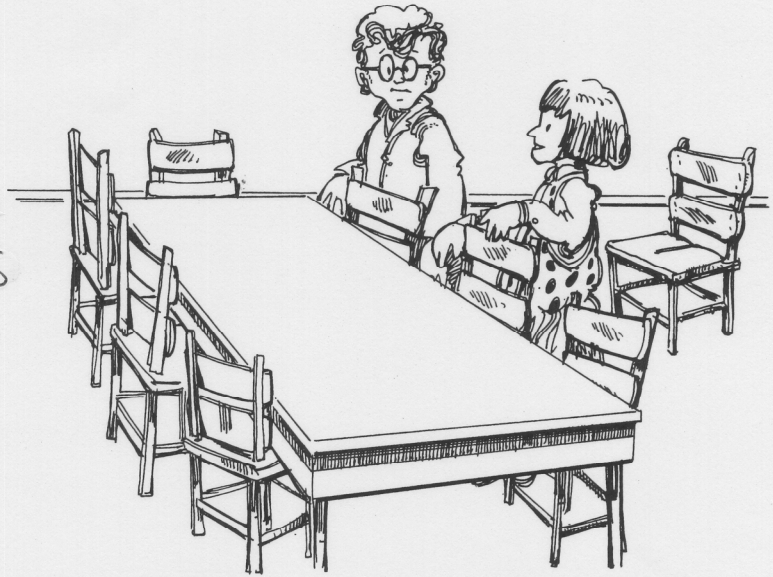


## Table for Eight?

### Problem Set A/B

**Directions:** First read the story "Table for Eight?" Information from the story will help solve some of the problems below.

Please email your responses to your Math teacher.



1. How many tables would be needed for ten people to sit together? Draw a diagram to support your answer.
2. A group of six couples were trying to decide on a seating arrangement. List all the possible combinations of table sizes that they could reserve. Please assume that an even number of people would sit at each table.
3. Refer to the table sizes listed in Problem 2 of this set. List the number of card tables necessary for each arrangement. Which arrangement used the greatest number of tables? Which arrangement used the least number of tables?
4. The table cloths were in two different sizes. One size cloth was large enough to cover two adjacent card tables. (Call this size 2.) The other size cloth covered only one card table. (Call this size 1.)  
Refer back to Problem 2 of this set. List the number and sizes of cloths necessary for each of the table arrangements in Problem 2. Use the minimum number of cloths for each table arrangement.  
Which arrangement used the greatest number of cloths? Which arrangement used the least number of cloths?
5. Draw three possible table arrangements for 16 couples to reserve for the prom. Please assume that an even number of people will sit at each table.