

Turning the Tables

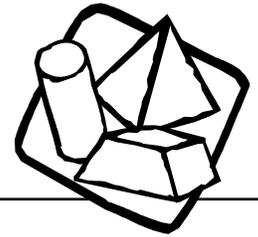


Figure out how to put the tables together for your party.

What you need

Triangles cut-outs (all the triangles need to be the same size and each triangle has to have sides the same length)

Scrap paper

Pencils

What to do

1. You are having a party at the park, and you found out that they have new tables that are shaped like triangles.
2. Make an arrangement that will seat exactly 6 people.
3. There can be only one person per side.
4. Tables must touch side to side.
5. You only have 6 tables.
6. All of the tables need to be connected by at least one side.
7. No table can stand alone.

What to ask

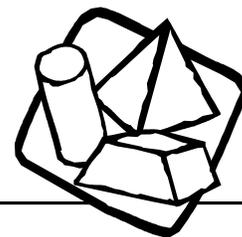
- How many possible ways can you arrange the tables?
- What is the most number of guests you can invite?
- How many different shaped arrangements can you make?
- How will you know you have made all the possible arrangements?



Did you know?

You need to be able to visualize how things will fit and the different possibilities of making them fit into spaces such as arrangements of toys or furniture in a room, making seating arrangements or packing a suitcase. This is a type of problem solving that happens often in real life situations as well as in mathematics.





What's next?

- Make an arrangement for 10 people.
- Use more tables.
- Think of different rules for arranging the tables.
- Think of different ways to predict the number of possible arrangements for any number of tables.

To learn more

Sir Cumference and the First Round Table: A Math Adventure

by Cindy Neuschwander

Fusing geometry with Arthurian legend, this tale describes the origin of the famous Round Table. After rectangular, square, diamond, and octagonal tables fail to please King Arthur and his knights, Sir Cumference, and his wife come up with a better idea.

Spaghetti for All

by Marilyn Burns

In this silly story written specifically to think about math, the table arrangements get all mixed up as more guests arrived and more tables and chairs are added.

How it helps with school

Texas Essential Knowledge and Skills (TEKS) Standards

Patterns Relationships and Algebraic Thinking: 3.6A; 4.7; 5.5A-B

Geometry and Spatial Reasoning: 4.9A; 5.8

Underlying Processes and Mathematical Tools: 3.15, 3.17B; 4.14, 4.16B; 5.14, 5.16B

National Council of Teachers of Mathematics (NCTM) Standards

Geometry, Problem Solving, Representations

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