

# COUNTDOWN Challenge

## Area & Perimeter

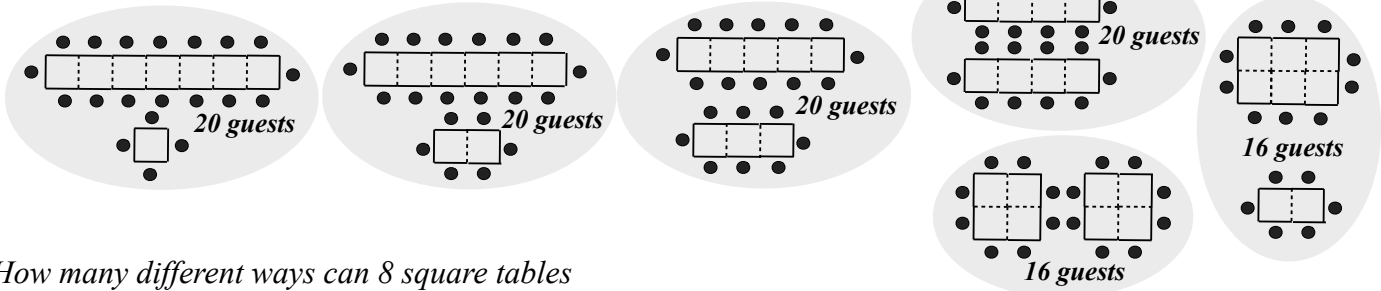
Inspired by Spaghetti & Meatballs for All by Marilyn Burns

It's party time and you have 8 square tables to seat your guests. Study our samples below then figure out different ways you can arrange tables to seat the maximum number of guests. You'll need extra paper for drawing or post-it notes to help you explore different possibilities. (Hint: We found 27 different arrangements.)

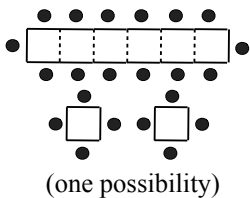
There are 2 ways to seat guests at a **1 table** arrangement.



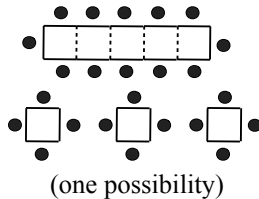
There are 6 ways to seat guests at **2 table** arrangements.



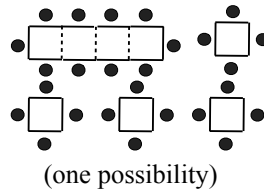
How many different ways can 8 square tables be arranged to seat guests at **3 tables**? \_\_\_\_



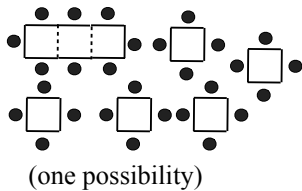
How many different ways can 8 square tables be arranged to seat guests at **4 tables**? \_\_\_\_



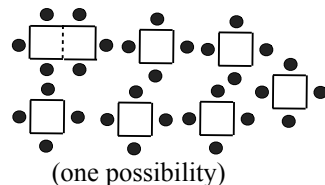
How many different ways can 8 square tables be arranged to seat guests at **5 tables**? \_\_\_\_



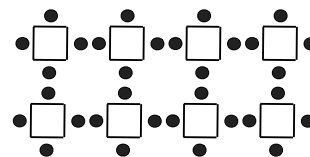
How many different ways can 8 square tables be arranged to seat guests at **6 tables**? \_\_\_\_



How many different ways can 8 square tables be arranged to seat guests at **7 tables**? \_\_\_\_



Is there any other way to arrange these **8 square tables**? \_\_\_\_



- Which table arrangement seats the most guests? \_\_\_\_
- Which table arrangement seats the fewest guests? \_\_\_\_
- Are the perimeter and # of guests for each table arrangement the same? \_\_\_\_
- What is the table area of each arrangement? \_\_\_\_