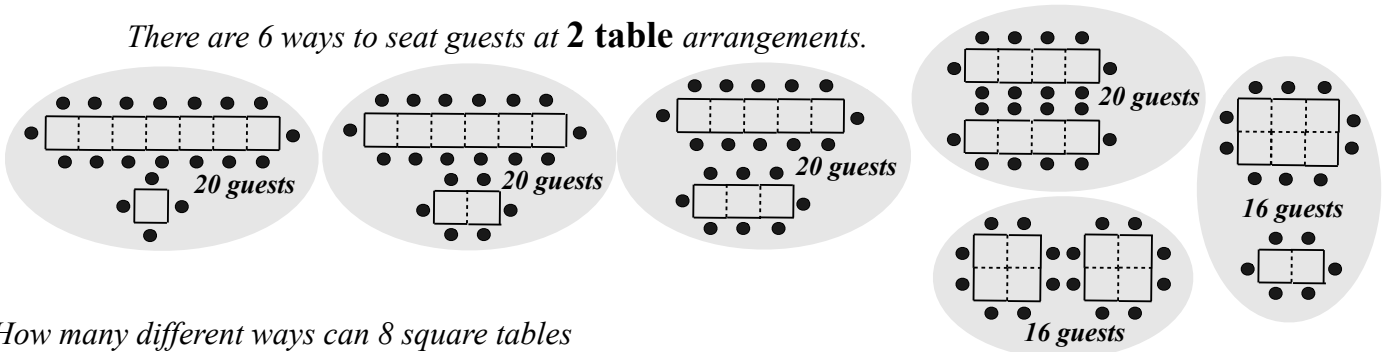# MathFLIX CHALLENGE
Area & Perimeter
Inspired by Spaghetti & Meatballs for All by Marilyn Burns

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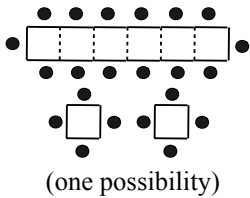
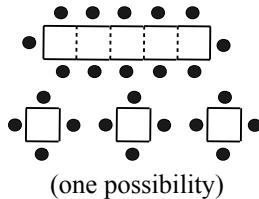*There are 2 ways to seat guests at a* **1 table** *arrangement.*

18 guests   *12 guests*

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

20 guests   *20 guests*   *20 guests*   *20 guests*   *16 guests*
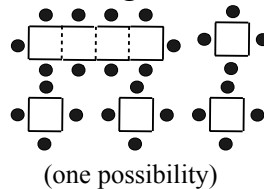
16 guests

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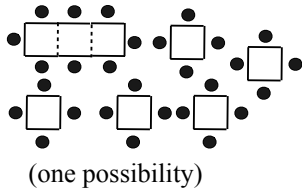

(one possibility)

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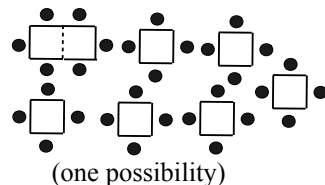

(one possibility)

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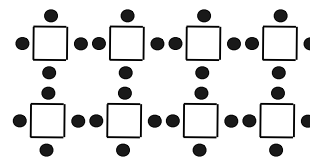

(one possibility)

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

(one possibility)

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

(one possibility)

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? ____