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? ___