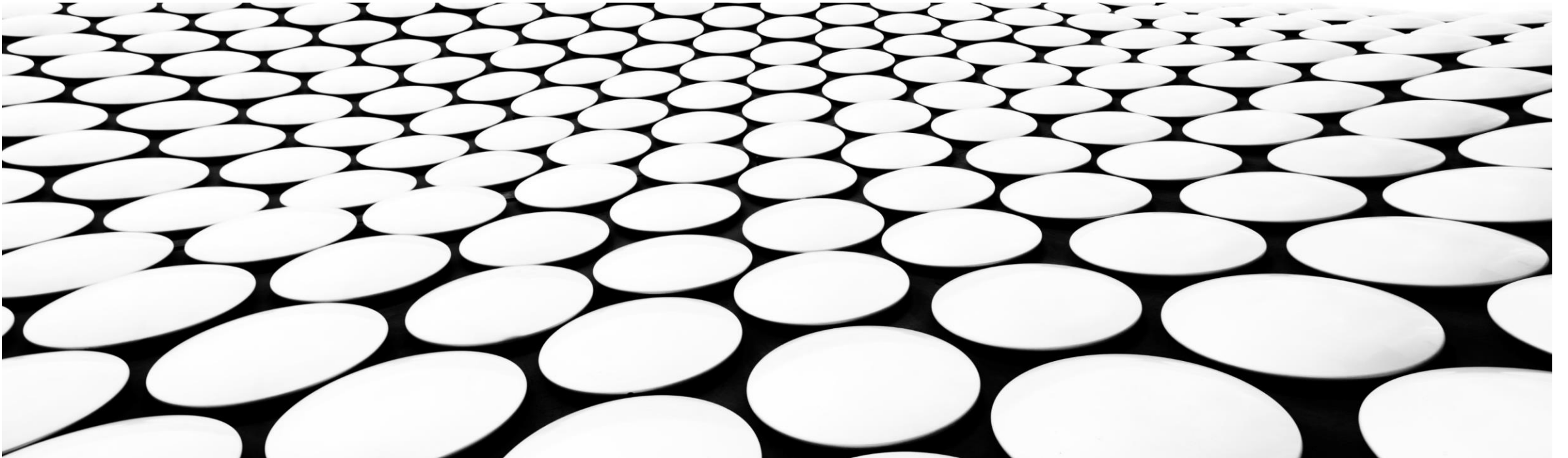


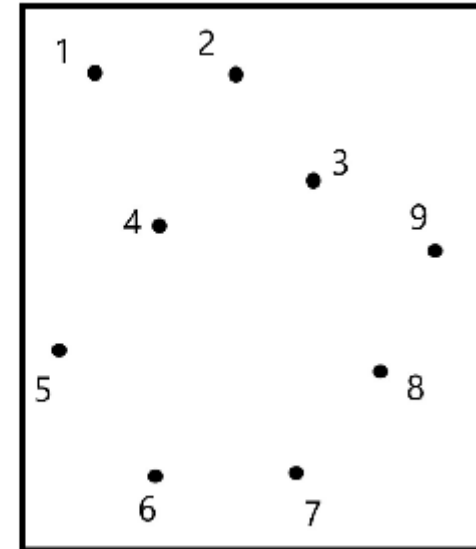
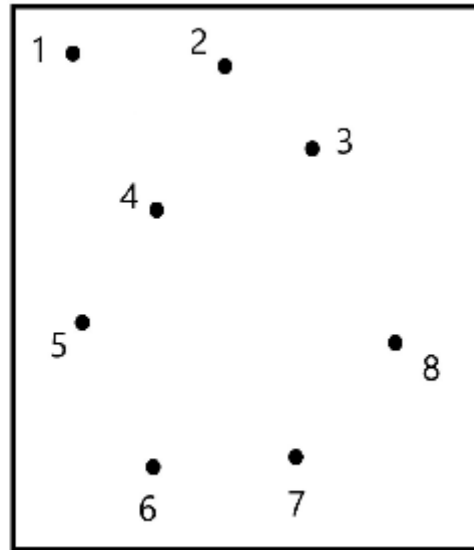
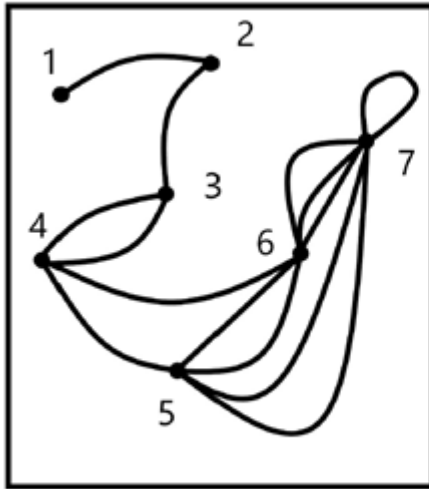
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# MATH CIRCLE AT FAU

9/21/2024



# JOINING DOTS



We discussed at length problems related to these graphs. You had to be there!

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# *The Joys of Counting*

## STRINGING UP DIGITS, PART DEUX

The counting numbers from 1 to a positive integer  $n$  are written as a long string of digits:

**123456789101112131415161718192021 . . . n**

This results in a string of 6993 digits. What is  $n$ ?

# STAIRS TO GOOD FORTUNE



- A staircase has 5 steps. You can walk up the staircase by taking one or two steps at a time. In how many ways can you walk up the staircase?

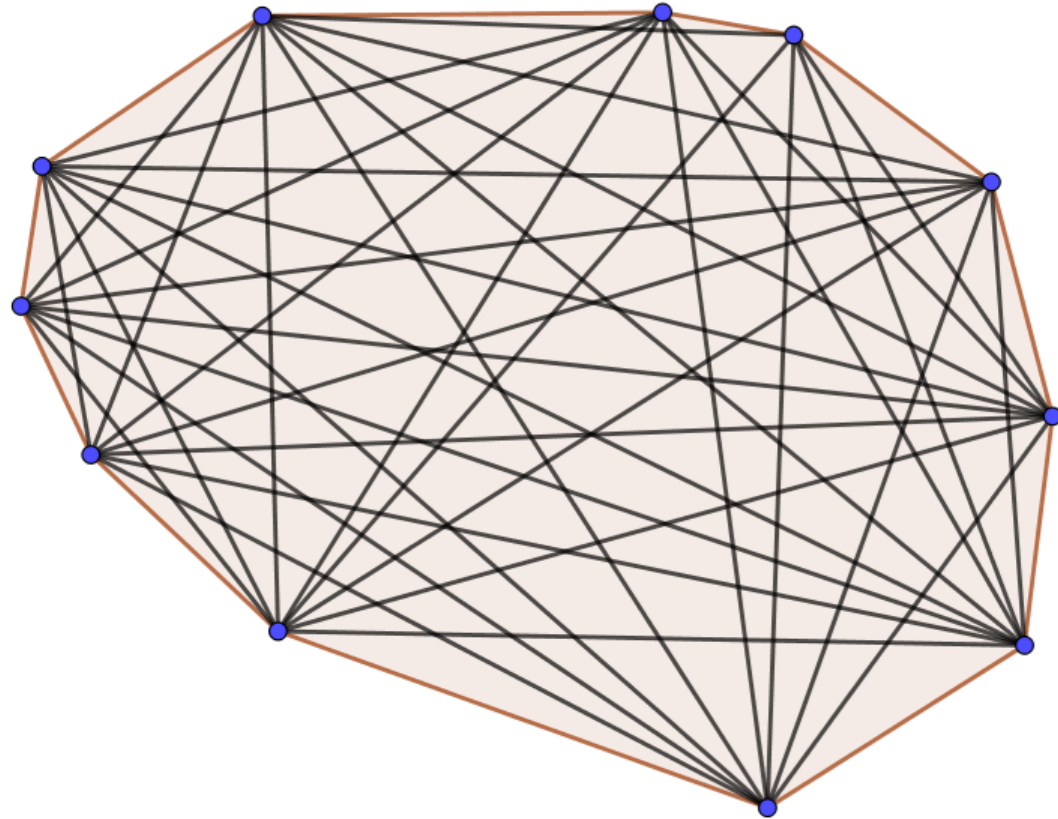


# POLYGONS AND THEIR DIAGONALS.

- A convex polygon has 7 sides. How many diagonals does it have?

## POLYGONALLY CONFUSED

A convex polygon has 54 diagonals. How many sides does it have?



## POLYGONALLY CONFUSED

A convex polygon has 54 diagonals. How many sides does it have?

Same question, if the polygon has 1325 diagonals.

