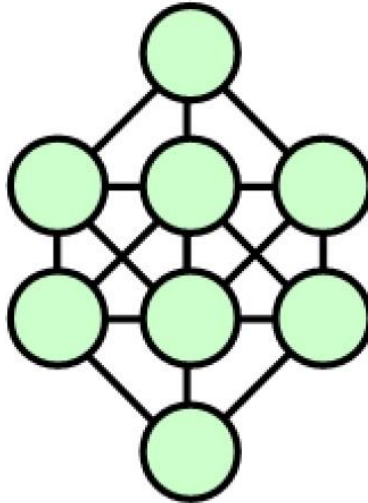


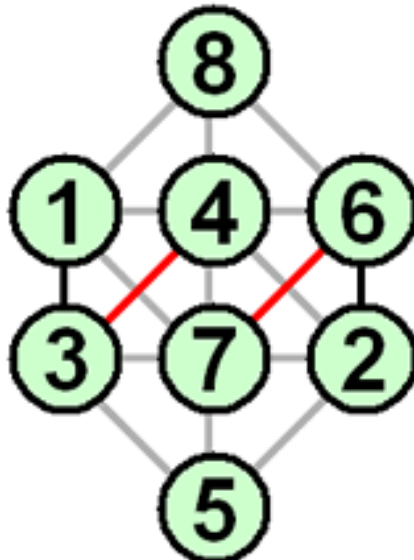
## Digit Placing Puzzle

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Write the numbers 1 through 8 in the circles so that no two numbers inside circles joined by a line differ by 1.

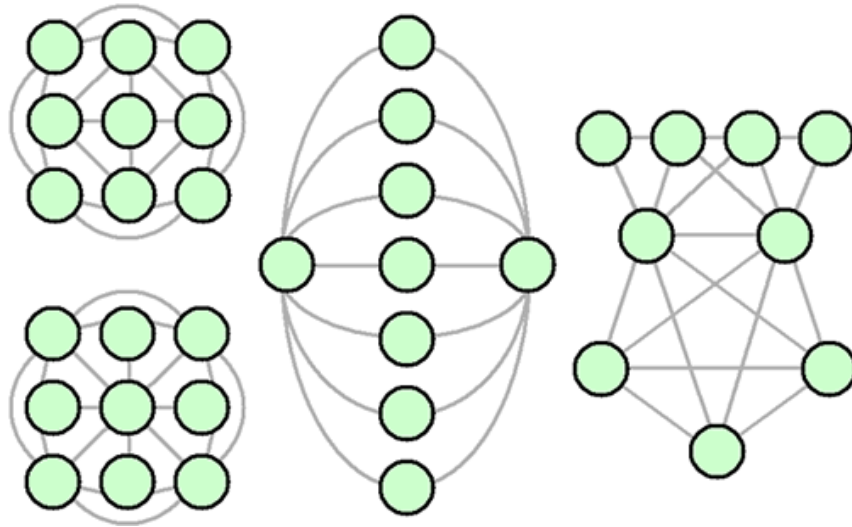


Here is an example of an incorrect solution (because 3 is linked to 4 and 6 is linked to 7):



### Extensions:

- Which of these digit placing puzzles are possible using the digits 1 through 9?



Two of the diagrams are impossible and two are possible - which ones?

- Make your own digit placing puzzle using the digits 0 through 9, but don't allow the 0 and 9 to be side by side.
- **Two Player Game:** Players take turns placing the digits. The first player who cannot place loses.

### The Math in the Problem:

In this puzzle, the students work with single digits and are given the task of placing them in different shapes and patterns. Given procedural constraints, such as not permitting certain digit placements, this problem allows the kids to utilize and build on their analytical and problem-solving skills.