

The Toothpick Challenge

Part 1: Arrange 12 toothpicks in the shape shown to the right. Now try to complete as many of the puzzles as you can. Remember that the finished product should be *only* what is listed (no extra toothpicks making incomplete squares) and you can't place toothpicks on top of one another. Sketch each of the solutions in the space below.

Puzzle 1: Remove four toothpicks to leave one square.

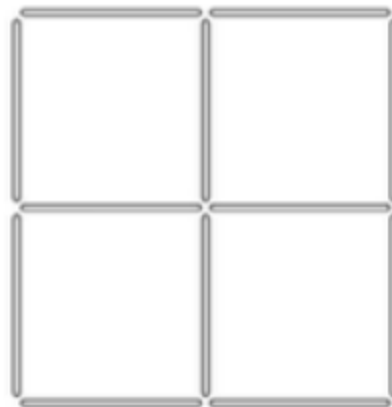
Puzzle 2: Remove four toothpicks to leave two squares.

Puzzle 3: Remove two toothpicks to leave two squares.

Puzzle 4: Make three congruent squares by moving three toothpicks.

Puzzle 5: Make three congruent squares by moving four toothpicks.

Now write your own problem using the given figure.



Part 2: Make the new shape shown on the right with 9 toothpicks. Try to complete as many of the puzzles as you can (again, no extra toothpicks dangling around). Sketch each of the solutions in the space below.

Puzzle 6: Remove three toothpicks to leave one triangle.

Puzzle 7: Remove three toothpicks to leave two triangles.

Puzzle 8: Remove four toothpicks to leave two triangles.

Puzzle 9: Remove two toothpicks to leave two triangles.

