**Problem of the Week #51**

**- Topology Tantrum**

Topology is an area of math that is interested in the properties of spaces that remain continuous when deformed. For example, it’s like studying stretching and bending, but not tearing or reconnecting. Try these two topological problems out!

Problem 1:

A mouse, cat, and dog all need to get back to their houses. Since the cat and mouse are afraid of the dog and the mouse is also afraid of the cat, none of their paths can cross. Can you find a way for them to get home?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mouse |  | Cat |  | Dog |
|  |  |  |  |  |
| Dog House |  | Cat House |  | Mouse House |

Problem 2:

Draw a continuous line, made up of no more than 4 straight segments, that goes through all nine dots.

