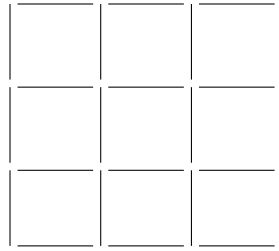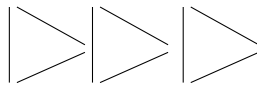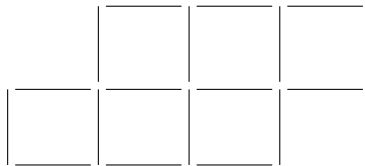**Question 1:** Take away four toothpicks to get five equal squares.
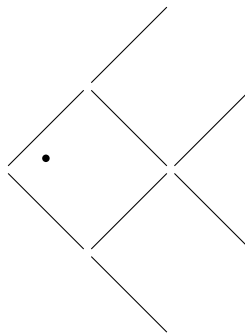
Question 2: Move three toothpicks to get four triangles (the triangles can be of different sizes).

Question 3: Take away two toothpicks to get four equal squares.

Question 4: Move two toothpicks and the eye so that the fish would swim in a different direction.

Question 5: What is the SMALLEST number of toothpicks you can use to make:

1 equilateral triangle: ___
2 equally sized equilateral triangles: ___
3 equally sized equilateral triangles: ___
4 equally sized equilateral triangles: ___

Guess how many you need to make 6 equally sized triangles. Was your guess correct?
Guess for 6: ___
Actual number need to make 6: ___

Question 6: What is the SMALLEST number of toothpicks you can use to make:

1 square: ___
2 equally sized squares: ___
3 equally sized squares: ___
4 equally sized squares: ___

Can you figure how many you'll need to make:
28 equally sized squares: ___
100 equally sized squares: ___

Question 7: Come up with a question related to Question 5 or 6. Can you solve your partner's question?

Question 8: What is the largest shape (shape with largest area) you can make with 6 toothpicks? How about 8? Check your answer by using the graph paper to estimate the area of each shape you make.

Challenge Problem: How many toothpicks do you need to make a 37×49 grid?

Challenge Problems: For each of the following problems, start with your toothpicks as shown below:

1) Remove eight toothpicks to leave only three squares.

2) Move six toothpicks to make only twelve triangles and only seven squares.

3) Move four toothpicks to make only eight triangles and only seven squares.

4) Move four toothpicks to make only nine triangles and only seven squares.