1) Move only two pieces to form the same “shovel” with the “snow” on the outside.

2) Connect all nine dots by four lines without retracing any line or part of a line or without picking

3) Move two pieces to end up with four squares all the same size of the original squares. (Note: All the 16 pieces must be used in making the four squares.)
4) Remove six pieces to end up with two squares.

5) What is the minimum number of segments, from the three below, that must be moved to make another congruent "martini glass" with the "olive" on the outside?

Answer: None - just rotate the paper.

6) Add two segments to the figure below to make another arrow that is of similar shape to the two arrows below.

Answer:

7) Connect each numbered circle to its corresponding same numbered circle. You cannot intersect any line segments, you cannot go outside the rectangle, and you can not touch any other circle.

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8) Add one line segment to the following to get ten. Do not move the given segments.

(11 - 1)

9) Put ten dots on your paper so that they can be connected by five equal line segments with four dots in each line segment.

10) Connect 6 congruent segments to make eight triangles of any size.

11) Connect 6 congruent segments to make four congruent equilateral triangles where the segments can not intersect or touch except at the endpoints of the segments.

Answer: a triangular pyramid

12) Fill in the circles with the digits 1 through 8 but no two consecutive digits may go in circles that are connected by a direct line (including diagonal lines).
13) Assume all 16 pieces below are the same length and form 8 equilateral triangles. Remove four line segments so that the result is four equilateral triangles.
(Note: All the 12 pieces must be used in making the four equilateral triangles.)

14) Move three of the balls from the left hand figure to make the figure at the right.
Bonus (tough one):

Connect all 12 dots by five lines without retracing any line or part of a line or without picking up the pencil. Also the start and endpoints of your lines must connect at the same place.

(Note: The lines can intersect.)

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