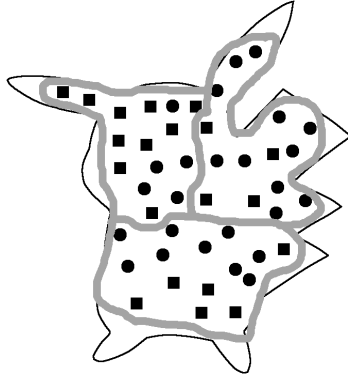# Math 1015: Homework #7

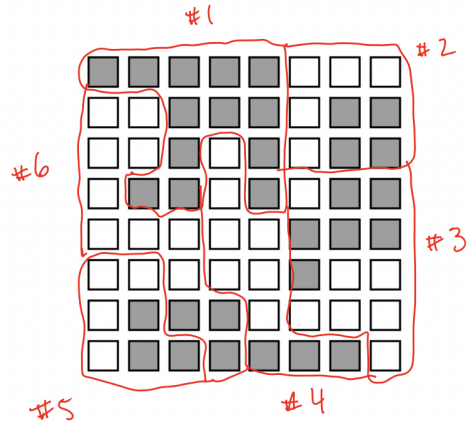**Question 1.** Here is one possible districting plan for Pikachuland:

Please compute the efficiency gap for this map. State your final answer as a percentage (use a calculator), and state who is being favored.

Your answer should look like: "The EG is ???% in favor of ???"

Question 2. The state of Iowa has 4 districts for the US House of Representatives. Look up the data for the Iowa elections in 2020, and compute the efficiency gap. Your answer should look like: "The EG is ???% in favor of ???"

I found the voting numbers on Wikipedia "2020 United States House of Representatives elections in Iowa". You can simplify things by rounding all numbers to thousands, and ignoring all votes for third-party candidates. Make sure you are using 2020 numbers.
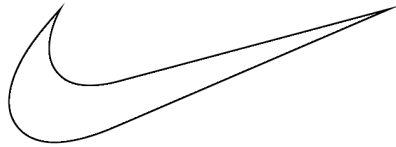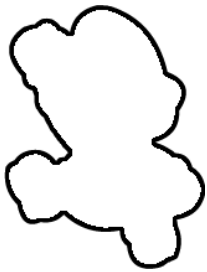
Question 3. Here is a map in 6 districts:

Please compute the efficiency gap for this map. State your final answer as a percentage (use a calculator), and state who is being favored.

Your answer should look like: "The EG is ???% in favor of ???"

Question 4. For each of these pictures, draw the convex hull. (You can scribble right on top of it.)

Question 5. Think of a nice logo– make sure it's connected (don't use Apple, since it's in 2 pieces) and has no holes (don't use Target, since it's missing space on the inside).

Draw the original logo by itself (you can just draw the outline, like I did above), and then draw it again with the convex hull on top of it.