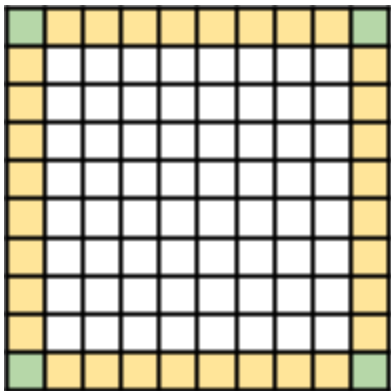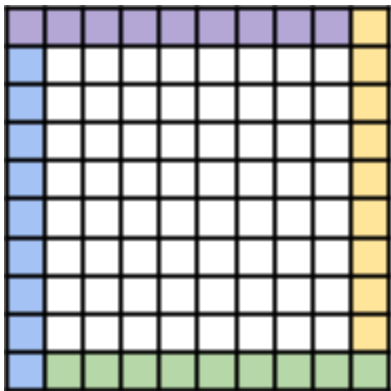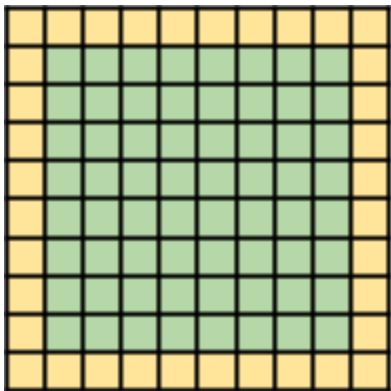**Cut out visual representations and written instructions for student groups to match. When ready, student groups can write equations for s boxes on a side and b boxes in the border.**
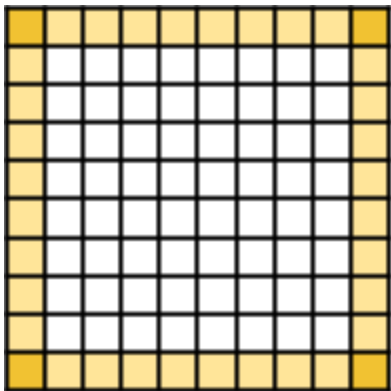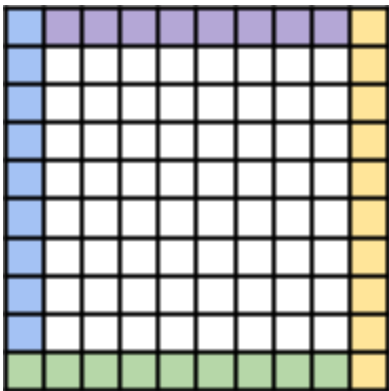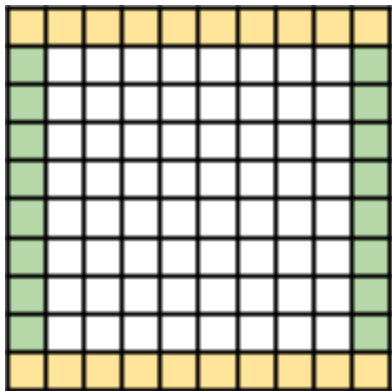

1.

2.

3.

4.

5.

6.

A. Add the boxes on the top and bottom of the grid. Now add boxes from the right and left sides, not including the overlapping boxes on the top and bottom of the sides.

B. Take the number of boxes on one side and multiply by 4. Now, subtract the 4 boxes you double-counted because of the overlapping corners.

C. Count the number of squares on a side. Take one square away from that number and multiply by 4.

D. Count the number of boxes on a side, not including the corners. Multiply this number by 4. Now, add the 4 corner boxes back in.

E. Take the number of boxes on one side. Multiply this number by itself. This is the number of boxes in the complete square. Now, count the number of boxes on one side of the inside square. Multiply this number by itself. Subtract the boxes in the inside square from the boxes in the complete square.

F. Count the number of boxes on the right side. Now, count the number of boxes on the bottom, not including the bottom right box, which you already counted. Then, count the number of boxes on the left side, not including the bottom left one, which you just counted. Now count the remaining boxes on the top row, not including boxes you counted before.