Handout 8: Affine Planes

1. Prove that any finite affine plane of order n contains n^2 many points.

2. Take any finite affine plane of order n. Prove that there are exactly $n^2 + n$ lines in this plane, which can be partitioned into $n + 1$ distinct parallel classes, each of which contains n lines.

3. Find an affine plane of order 4.