UWO Math 2124 Fall 2019
Introduction to Mathematical Problems
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Handout: Sept 12

Example 2.1:
Into how many regions is the plane divided by n lines in general position (no two lines parallel; no three lines meet in a point)?

Example 2.2: (Textbook, p. 43)
The plane is divided into regions by straight lines. Show that it is always possible to color the regions with two colors so that adjacent regions are never the same color (like a checkerboard)

Example 2.3: (Textbook, p.43)
Prove that the sum of the interior angles of any n-gon is $180(n-2)$ degrees.

Example 2.4: (Textbook, p. 55, Ex. 2.4.9)
Prove that all positive integers except the powers of two can be written as the sum of at least two consecutive positive integers. Once again, algebra can be used, but so can pictures!