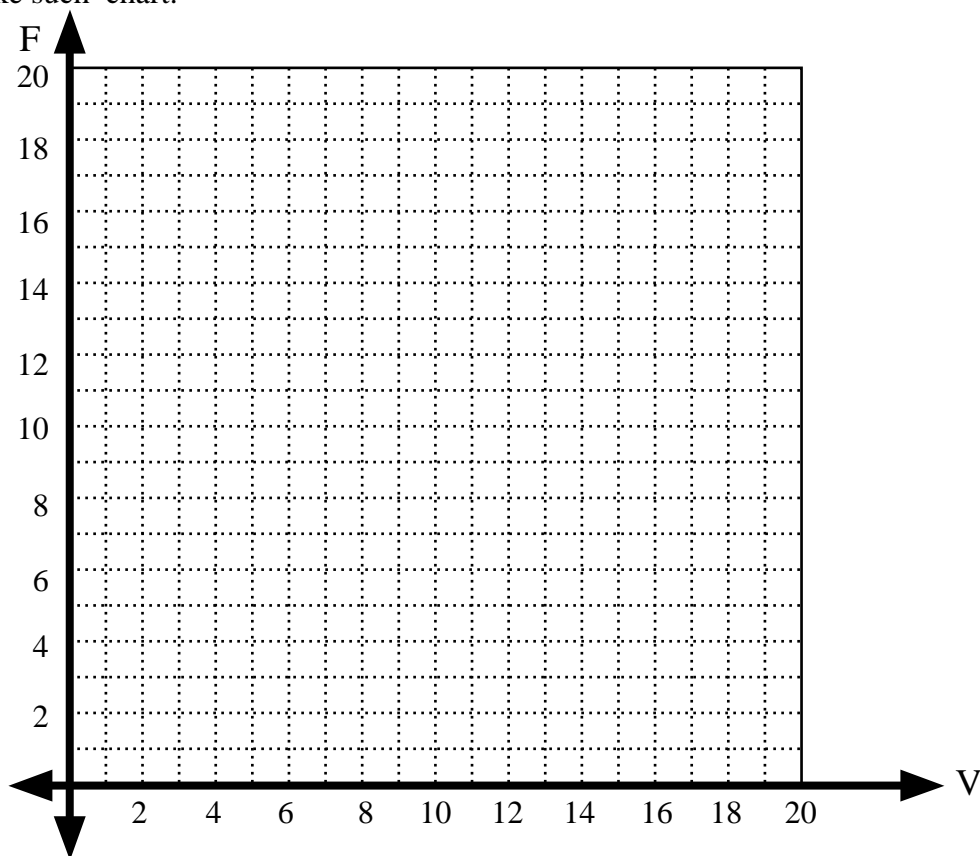


### The Vertex-Face Chart for Polyhedra

Suppose we made a set of x-y axes, where the x-axis is the number of vertices of a polyhedron, and the y-axis is the number of faces. Then each **dot** on the graph (with integer coordinates) might correspond to some polyhedron. Below we'll try to make such chart:



- (1) Where are 5 Platonic solids on this chart?
- (2) If a polyhedron is self-dual, where must it be on this chart?
- (3) Are there any regions of the chart where **no polyhedra** are possible?