SAME FIGURE.

The lines B A, E D, G F, &c. being drawn in the plane B F perpendicularly to A F, the common ſection of the two planes B F, F N, if they are alſo perpendicular to the plane F N, the plane B F paſſing through thoſe lines, is perpendicular to the plane F N.

III.

The inclination of a line to a plane is the acute angle formed by that line, and another line drawn from the point, in which the firſt line meets the plane, to the point in which a perpendicular to the plane, drawn from any point of the firſt-mentioned line above the plane, meets the ſame plane.

SAME FIGURE.

Thus the acute angle F D G is the inclination of the line D G to the plane F N.

IV.

The inclination of a plane to a plane is the acute angle formed by two lines drawn from any the ſame point of their common ſection at right angles to it, one upon one plane, and the other upon the other plane.

SAME FIGURE.

Raiſe up the planes D Y, Z X, making W Y coincide with W y. Then the line D W, being the common ſection of the planes D Y, D Z, and R T perpendicular thereto, and R S alſo perpendicular thereto, at the ſame point R, the acute angle S R T is the inclination of the plane D Y to the plane D Z.

V.

Two planes are ſaid to have the ſame or a like inclination one to the other, which two other planes have to each other, when the ſaid angles of inclination are equal to one another.

VI.

Two planes, which, being either way produced, do not meet each other, are ſaid to be parallel one to the other.

VII.

A pyramid is a ſolid figure contained by planes that are conſtituted betwixt one plane and one point out of that plane, all meeting in that one point.

ILLUSTRATION. Plate II. Fig. 2.

Make B in the triangle L A B coincide with B in the plane L B, alſo make C coincide with C, and L with L, and B in the triangle B A E with B in the plane L B, then will the Figure thus formed repreſent a pyramid.

VIII.

The point A is the vertex of the pyramid. The plane L B the baſe thereof. The planes L A B, B A C, &c. the Sides thereof. And the line A H the perpendicular altitude or height thereof above the plane of its baſe L B.

THEOREM I.

One part of a line cannot be in a plane and another part thereof above it.

PLATE I. Fig. 1.

Make F in the plane F B coincide with F in the plane F N.

DEMONSTRATION.

For, if it be poſſible, let A D, part of the line A D G, be in the plane F N, and the part D G above the ſame, then A D being in the plane F N, it can be produced in that plane ſuppoſe to F; now the points D and G are in the plane B F, which paſſes through the