1. Define (a) a right prism; (b) a trihedral angle; (c) the measure of a dihedral angle; (d) similar polyhedrons; (e) cylinder of revolution; (f) projection of a line on a plane.

2. Prove that if two planes cut each other their intersection is a straight line.

3. Prove that if a straight line is perpendicular to a plane, every plane passed though the line is perpendicular to the first plane.

4. Prove that two rectangular parallelopipeds, having equal bases are to each other as their altitudes. (2 cases.)

5. Prove that if a pyramid is cut by a plane parallel to its base, (a) the edges and altitude are divided proportionally; (b) the section is a polygon similar to the base.

6. Find the radius of a sphere whose surface has the same numerical value as the circumference of a great circle of the sphere.

7. The diameter of a cylinder is 14 feet and its altitude 8 feet; find the altitude of an equivalent right prism whose base is 4 feet square.

8. The altitude of a right cone equals the diameter of its base; find the ratio of the area of the base to that of the lateral surface.