



32 credits, necessary to pass, 24.


1. Define polyedral angle ; oblique prism ; paralleloiped ; volume of a polyedron ; frustum of a cone ; similar cylinders. 6
2. Explain the difference between the altitude and slant height of a pyramid..... 2
3. Prove that if a straight line be perpendicular to two straight lines at their point of intersection, it will be perpendicular to the plane of those lines..... 4
4. Prove that if a pyramid be cut by a plane parallel to the base :
 - (a) The edge and the altitude will be divided proportionally 2
 - (b) The section will be a polygon similar to the base.... 2
5. Prove that if a plane be passed through the diagonally opposite edges of a paralleloiped, it will divide the paralleloiped into two equivalent triangular prisms..... 4
6. Prove that any triangular prism may be divided into three triangular pyramids, equal to each other in volume..... 2
7. Prove that the volume of a cylinder is equal to the product of its base and altitude..... 2
8. Give the formula for finding each of the following : the volume of any prism ; the convex surface of the frustum of a cone ; the convex surface of a cylinder ; the volume of a sphere..... 4
9. Find the volume of the frustum of a square pyramid of marble, the lower base being 4 feet square, the upper base $2\frac{1}{2}$ feet square and the altitude 10 feet..... 4


 Carefully read and obey the following directions :

 Do you now, at the close of this examination, conscientiously declare that you had no previous knowledge of the questions to be proposed, that you have neither given to any other scholar, nor received from any source, explanation or other aid in answering any of them. If so, write in the next line after the end of your set of answers, near the right side of the paper, the words

"I do SO declare."

and underneath subscribe your name.

 Every set of papers lacking this declaration and signature, however satisfactory, in other respects, will be rejected, on the presumption that the required declaration could not conscientiously be made.

 Fold your MS. in proper form for filing, and indorse the last leaf with the name of the institution, your own name, the subject, and the date of the examination.