1ˢᵗ *DRAWING*

Tint-drawing, size A2 (594x420 mm)
Deadline for delivery: Oct-24
(Titles in capital letters)

1) TRUNCATED PARALLEPIPED

Extend the figure to the parallelepiped $ABCDA_1B_1C_1D_1$ such that the edges starting from the vertex A are AB, AD and AA_1. Trisect the edges and cut off small tetrahedrons at the vertices determined by vertex and the closest trisector points to the vertex. Show the visibility of the polyhedron. (Worksheet Parallelepiped (1101_01))

2) AUXILIARY PROJECTION FOR SPECIAL PURPOSE

The first image of the segment AB is given in a slanting plane that is defined by tracing lines. Find the second image of AB. Construct

a) regular pyramid with pentagon base

b) regular prism with hexagon base

by means of auxiliary projections such that the the base polygon lies in the plane, the segment AB is one of the edges of the base polygon and the height is the double of AB. Show the visibility.

3) INTERSECTION OF A PAIR OF PLANE SHEETS

Represent a rectangle $ABCD$ in a spanned plane. The sides of the rectangle lie on first principal lines and first gradient lines. Construct a quadrilateral $PQRS$ that lies in a slanting plane. Construct the line of intersection of the two planes, show the visibility of the rectangle $ABCD$ and the quadrilateral $PQRS$.

4) SHADOW CONSTRUCTIONS

Construct all shadows and shades of the schematic building in the figure.

5) INTERSECTION OF POLYHEDRONS

Construct the intersection of a horizontal prism with at least quadrilateral base and a polyhedron, standing on the first picture plane. Let the second polyhedron be

a) a regular pyramid with pentagon base

b) oblique prism with regular pentagon base.

Let the intersection be a

a) complete interpenetration

b) partial intersection,

Show the visibility of the second polyhedron surface minus the horizontal prism.

6) METRICAL CONSTRUCTIONS

Let a plane be given by the first and second principal lines passing through the point O. Construct regular hexagon in the plane with the centre O. The length of the sides is 2.5 cm. Construct the hexagonal based right pyramid opening up whose height is 6 cm Show the visibility, construct the self-shadow and the projected shadow at direction of lighting parallel to the second image plane.

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$X_{1,2}$

$X_{1,4}$