

1. Exercise : 9

Week - 9

2. Date: 09/12/2020

3. Title

Section of Solids

4. Aim

To draw orthographic multiview projections of sectioned solids.

5. Software used:

AutoCAD - 2020

6. Introduction: Advanced 3D part modelling software

A sectional view or a section looks like inside of the object. Sections are used to clarify the interior construction of a part that cannot be described by looking at the object or by the hidden lines in exterior views. By taking an imaginary cut through the object, and removing a portion, the inside features can be seen more clearly.

3D part sketch

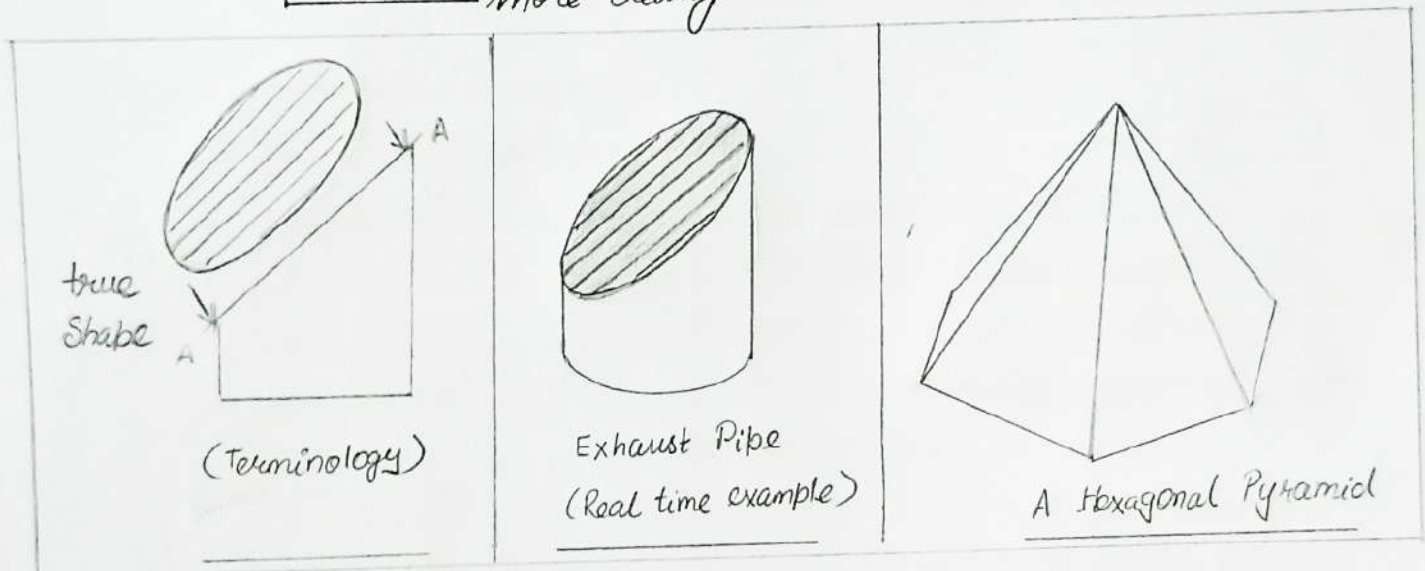


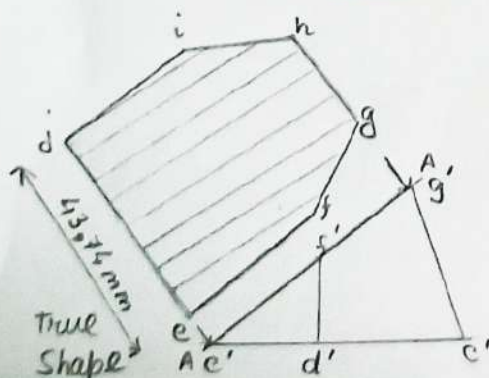
Fig. 3D part model

7. Procedure (for solving question #):

7.1 Question outline

7.2 Object

To draw the multiview projection of a hexagonal pyramid with base 30 mm and axis 65 mm long resting on its base on ground.



Sectional Front View

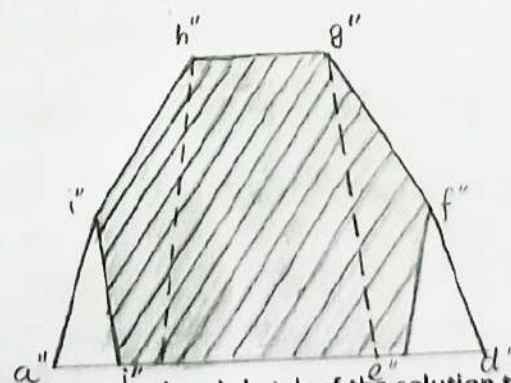
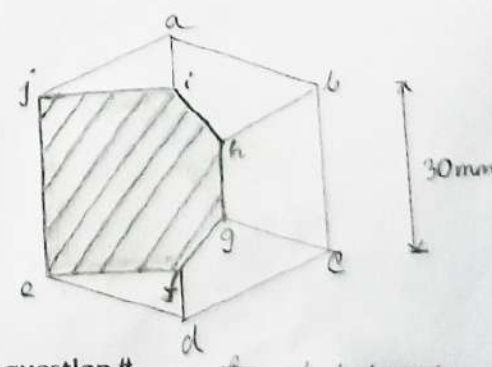


Fig. Free hand sketch of the solution to question #
Sectional Side View



Sectional top view

7.3 Procedure:

Step 1.

Set Units, Limits and zoom to workspace.

Step 2. Draw Hexagonal Pyramid with base 30 mm and axis 65 mm long. Then draw line of 25 mm from apex to down.

Step 3. Draw a line & rotate 45° & move in such way that it cut hexagonal pyramid and touch 25 mm line from apex.

Step 4. Draw the section solid by choosing the line and generate in 3D and draw the true shape.

Step 5. View in the layout the different views.

8. Commands/ tools/ features used:

S.N.	Command/ tool/ features	Use
1.	UNITS	To set precision to 0.
2.	LIMITS	To set boundaries of work space.
3.	ZOOM	To zoom to required space.
4.	PYRAMID	To draw pyramid of required measurements.
5.	LINE	To draw line of required measure.
6.	Section Plane	To make line to a section plane.
7.	ROTATE	To rotate to certain angle.
8.	DIMENSIONS	To mention the dimensions.
9.	TEXT	To input text in figures.

9. Result:

Using the above commands and following the above procedures, the orthographic multiview sections of hexagonal pyramid is successfully created.

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Signature		Marks	