

# AutoCAD 3D Drawing Practice

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| SUBJECT | TEACHER | LEVEL | DATE         |
|---------|---------|-------|--------------|
| AutoCAD | KR      | 3D    | May 26, 2018 |

## OVERVIEW

Exercise for students to attempt as part of flipped classroom or lifelong learning and self-development.

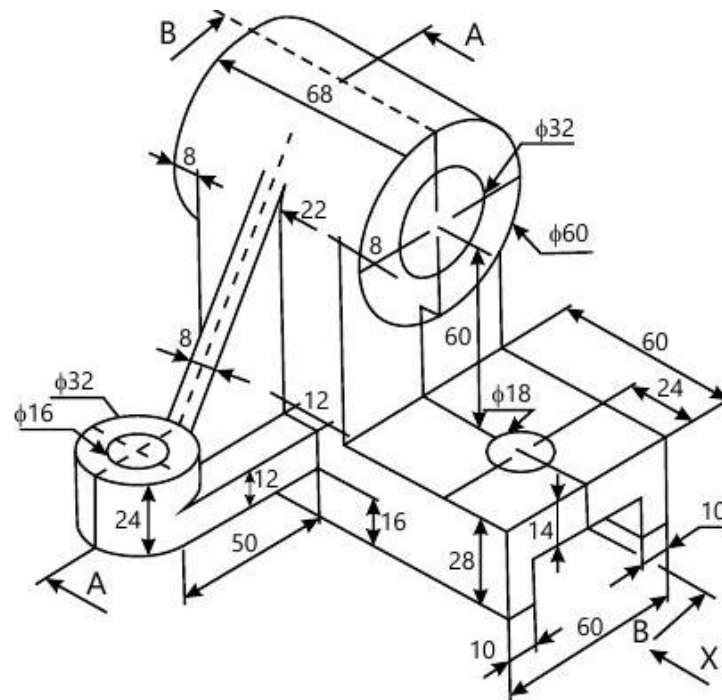
Reproduce drawing given as per objectives and student guide.

| TEACHER GUIDE |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | STUDENT GUIDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OBJECTIVES    | <p>Ability to set a 3D dwg environment.</p> <p>Ability to set linetype, lineweight, point style.</p> <p>Ability to create layers and customize</p> <p>Ability use draw tools: Line, rectangle, circle</p> <p>Ability to use modify tools: Erase, trim, offset, copy, move, join.</p> <p>Ability to use 3D modeling tools to draw: Box, extrude, Presspull.</p> <p>Ability to modify the UCS location and set as needed.</p> <p>Ability to use Boolean operation: Union, subtract, intersect.</p> <p>Ability 3D operations such as: 3D move, 3D rotate, 3D align</p> <p>Possess knowledge of floating viewports for 3D view.</p> <p>Ability to navigate and use the Navigational Cube and navigational Bar.</p> <p>Set the environment for a render and render.</p> | <p>Set limits, units, draw border, activate a 3D modelling ribbon.</p> <p>Set linetype, lineweight, point style</p> <p>Create appropriate layers and set properties.</p> <p>Use draw tools to replicate the dwg given.</p> <p>Use the modify tools as and when required.</p> <p>Draw the object using box, or rectangle and extrude/presspull.</p> <p>Use new UCS to orient the UCS as needed.</p> <p>Union primitives, subtract and intersect as needed.</p> <p>Use 3D move, 3D rotate and 3D align as needed.</p> <p>Create floating viewports for 3D view and for those with no prior knowledge in layout display: skip this step.</p> <p>Use the navbar and navcube to rotate and view object as needed.</p> <p>Shift to Visualize tab in ribbon menu. Assign a material to the object and set the render environment then render according to resources and time available.</p> <p>Those who do not know how to render, skip this step.</p> |
| ACTIVITY      | <p>Correct and discuss upon difficulties of met.</p> <p>Discuss on the strategy adopted and discuss on methodology and provide alternatives and short cut methods that can be adopted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Complete the exercise in 1 hour maximum and print on an A4 sheet with the following parameters:</p> <p>A4 size paper, fit to paper, center the plot, landscape, grayscale, plot to limits.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SUMMARY       | <p>Summarize the different strategies adopted to emphasize on speed, precision and good drawing management.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Copy the different strategies adopted and reproduce for practice.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## REQUIREMENTS

Student should have completed the AutoCAD Level 1 course (Beginner or Essential Level) and have a basic knowledge in 3D.

## DRAWING TO REPRODUCE



## DRAWING IN AUTOCAD/RENDER

