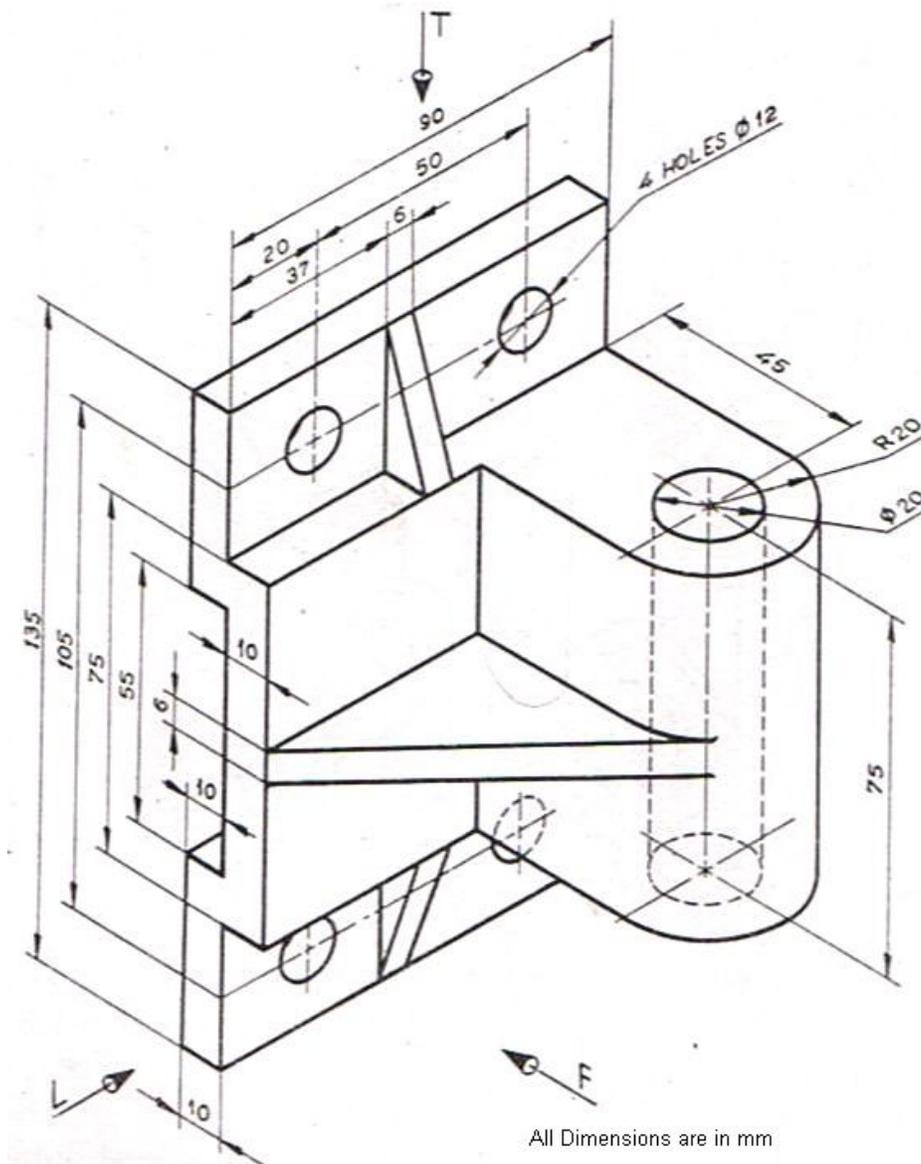


# MS CAD Foundations

## **Challenge**

Using the isometric drawing, create a set of orthographic drawings showing Front, Top, and Right sides

- Show Centerlines
- Dimension drawing in mm
- Create a title block with ID#, date, scale
- Title the drawing "Bracket"



## **Going Beyond Suggestion:**

Design the product the bracket fits on.

## MS Career Prep

### **Challenge**

Demonstrate your growing career readiness in your chosen field. Prepare for an interview by researching common interview questions from companies in this field and record your answers in preparation for your interview day.

### **Going Beyond Suggestion:**

Simulate and video you being interviewed.

## MS Challenging Technical Issues

### **Challenge**

Prepare a presentation on the "the impact of Covid-19 on middle school learning."

### **Going Beyond Suggestion:**

Brainstorm ways to improve any issues you identify as negative.

## MS Chapter Team

### **Challenge**

Demonstrate the ability of a TSA chapter to still have proper chapter meetings virtually, include various elements from Robert's Rules of Order as you conduct your meeting.

### **Going Beyond Suggestion:**

Critique your, or other videoed meetings, identifying elements from Robert's Rules of Order which have either been properly carried out or misused.

## MS Coding

### **Challenge**

Recreate an "old school" classic game (such as Breakout or Frogger).

### **Going Beyond Suggestion:**

Give "old school" a modern look.

## MS Data Science and Analytics

### **Challenge**

Locate a set of data based on the Covid-19 outbreaks around the country and the responses of those states. Using the data, rank the states based on how their responses "flatten the curve."

### **Going Beyond Suggestion:**

Identify examples of how data can be manipulated to show what the analyst wants it to show.

## MS Foundations of Information Technology

### **Challenge**

Create a short "how to" that explains to the viewer/user what they need to know so that they can use the software, software tool or digital application with little help.

### **Going Beyond Suggestion:**

Video someone using the "How to" and get feedback from the user.

## MS Digital Photography

### **Challenge**

Create a short series of photographs which help others visualize how people in your community/household are handling the "Stay-at-Home" orders.

### **Going Beyond Suggestion:**

Include a way you would prepare the collection to use in an art show.

## MS Electrical Applications

### **Challenge**

Create a schematic and the circuit that goes with it.

### **Going Beyond Suggestion:**

Simulate a way to show someone who doesn't have access to electrical components how to learn to identify and use them.

## MS Forensic Technology

### **Challenge**

Create an interactive, resettable crime scene which could be used in to demonstrate to others how to critically assess a crime scene.

### **Going Beyond Suggestion:**

Create a series of tutorial videos which demonstrate clearly how to use the skills needed for analyzing a crime scene.

## MS Leadership Strategies

### **Challenge**

With the current Covid-19 situation and the "Stay-at-Home" order, local TSA chapters will be challenged to maintain membership, interest, and individual growth. Develop a plan which keeps your members excited about TSA and keeps them connected to one another.

### **Going Beyond Suggestion:**

Put your plan into action and critique the results, then make a new plan.

## MS Problem Solving

### **Challenge**

Almost every student in the country is faced with having limited resources at their disposal. Create your own problem solving challenge which can be solved with the basic supplies most students have in their homes. Make sure to provide a possible solution.

### **Going Beyond Suggestion:**

Challenge someone virtually to complete your problem then evaluate their design

## **MS Promotional Marketing**

### **Challenge**

There will be a whole new class coming next year who would love to join TSA if they only knew what it was all about. Let them know! Design several elements to be used in a marketing campaign for TSA in your school.

### **Going Beyond Suggestion:**

Run your campaign and report on the results and feedback you get.

## **MS System Control**

### **Challenge**

Design and construct or simulate an automated parking garage. Have a system which keeps track of how many cars are in the garage how signals when it is full. Include an interactive way for the vehicle to enter or exit.

### **Going Beyond Suggestion:**

Add some automated amenities for customers of your automated garage.

## **MS Tech Bowl**

### **Challenge**

Design a new "look" for how Tech Bowl is conducted at TSA State. This could be a new format, new control system, etc.

### **Going Beyond Suggestion:**

Write your own Tech Bowl questions and try them out on somebody. Address how others performed on your questions.

## **MS Technical Design**

### **Challenge**

With the "Stay-at-Home" order, students now, more than ever, need a way to organize the environment around them in order to establish a better learning environment. Identify an area of your house which is in need a new organizational system. Design a new system which could be produced using available supplies.

### **Going Beyond Suggestion:**

Construct your design and try it out, then evaluate the results.