

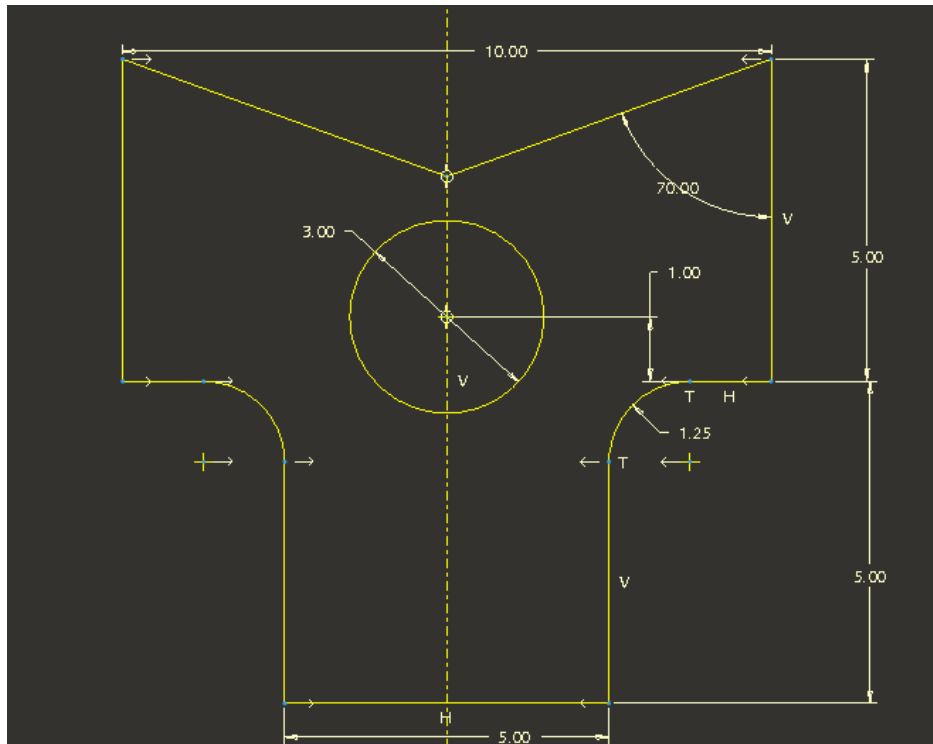
## Introduction to 2D Drafting- Dimension and constraints

### Review:

1. Homework files.
2. Sketching tools
3. Create a part file
4. Extrude
5. Create text as a part of a section (the size of the text)
6. Dimensions

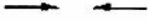


### 1. Dimension:

- Radius
- Diameter
- Symmetric distance
- Angle
- Reference point



2. Constraint:
- Vertical
  - Horizontal
  - Perpendicular
  - Tangent
  - Middle point
  - Collinear
  - Symmetric
  - Equal radii, length curvature
  - Parallel

t:

Name	Symbol	Description
Equal radius and diameter	R	If you sketch two or more arcs or circles with approximately the same radius, the system may assume that the radii are equal
Symmetry		Two vertices may be assumed to be symmetric about a centerline
Horizontal or vertical lines	H or V	Lines that are approximately horizontal or vertical may be considered to be exactly so.
Parallel or perpendicular lines	or ⊥	Lines that are sketched approximately parallel or perpendicular may be considered to be exactly so.
Tangency	T	Entities sketched approximately tangent to each other may be assumed to be tangent
Equal segment lengths	L	Lines of approximately the same length may be assumed to have the same length
Point entities lying on other entities or collinear with other entities		Point entities that lie near lines, arcs, or circles may be considered to be exactly on them. Points that are near the extension of a line may be assumed to lie on it.
Equal coordinates		Endpoints and centers of the arcs may be assumed to have the same X- or the same Y-coordinates
Midpoint of line	M	If the midpoint of a line is close to a sketch reference, it will be placed on the reference.