ME-160
Mechanical Engineering Drawing

Isometric Views

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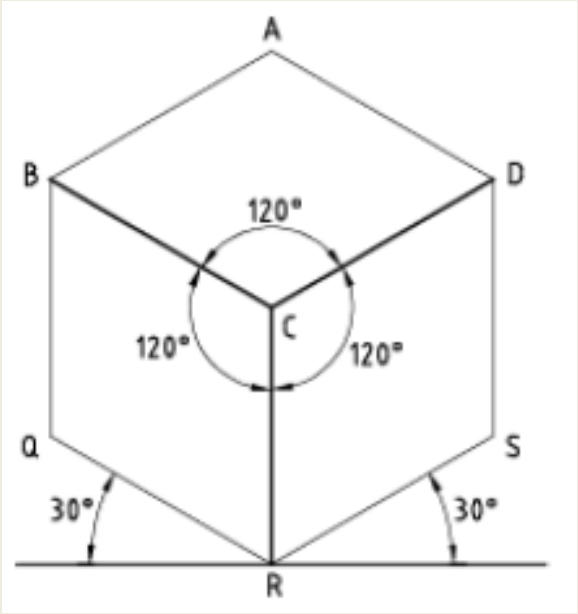
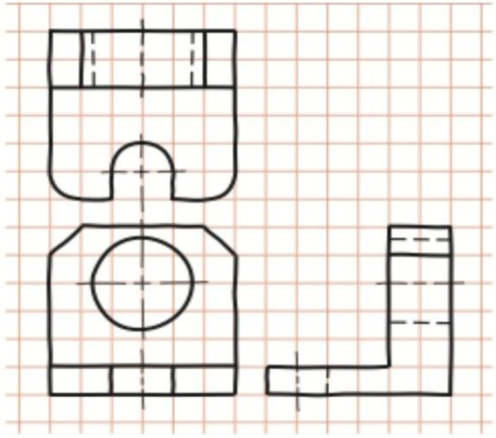
What is Isometric View?

- Isometric view or projection shows all three dimensions of an object which are useful to visualize an object.
- There are 3 isometric axes with an angle of 120º between them.
- Any line drawn parallel to an isometric axis is called isometric line.
- To draw isometric view true dimensions are used.



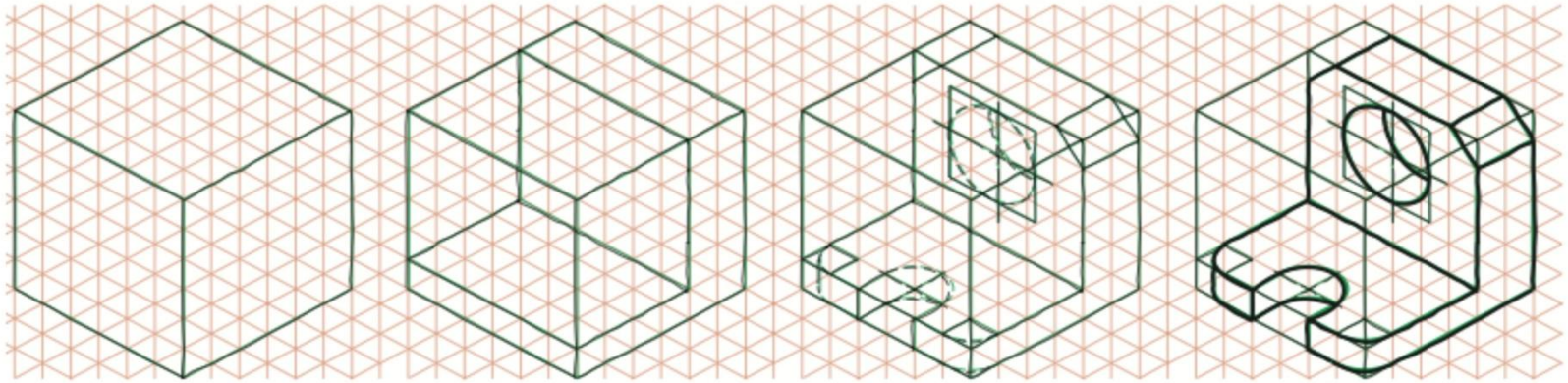
Isometric View: Example

Basic steps for isometric drawing



Isometric grid

(A) THE PART



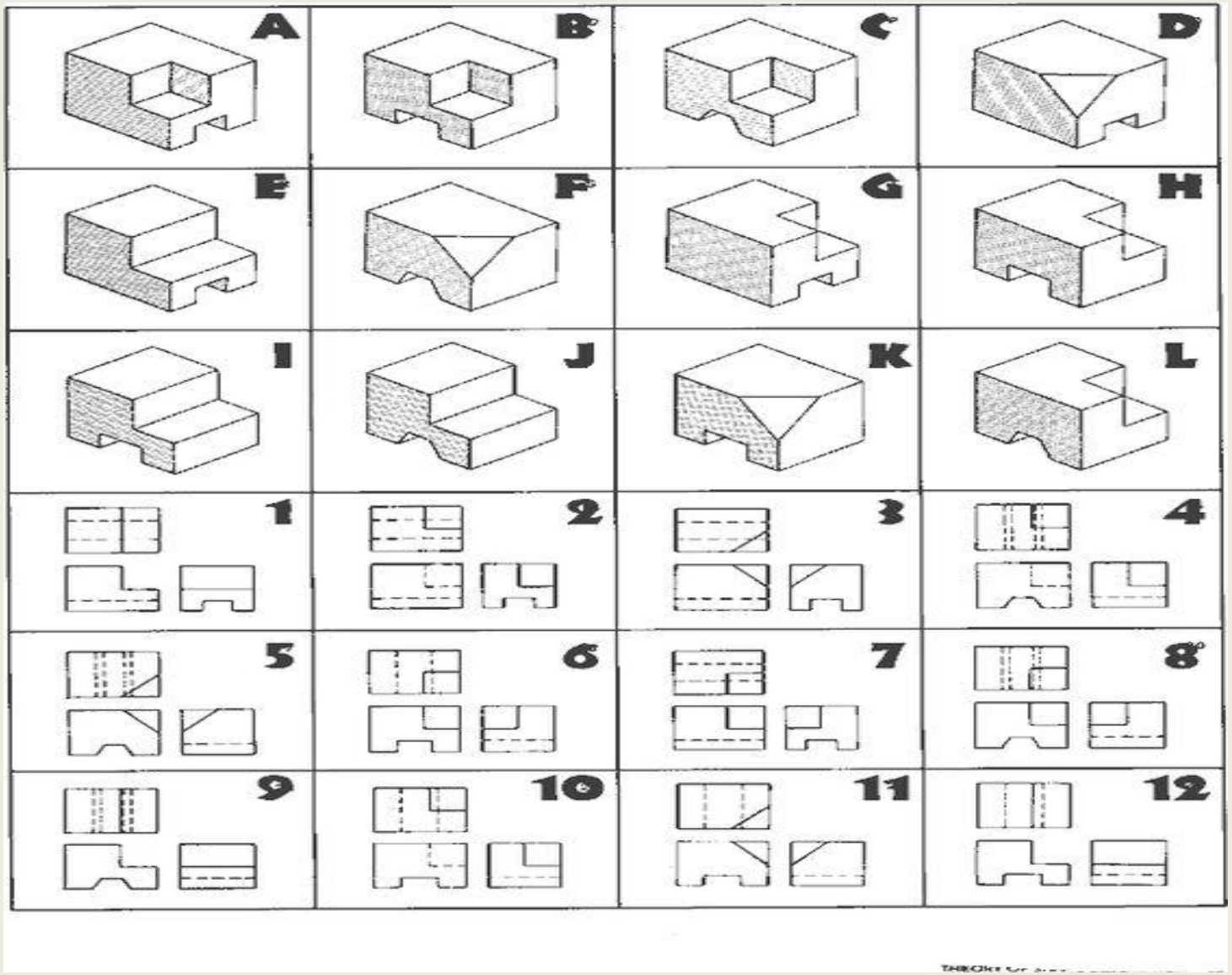
STEP 1
BUILD THE FRAME

STEP 2
BLOCK IN THE DETAILS

STEP 3
ADD THE DETAILS

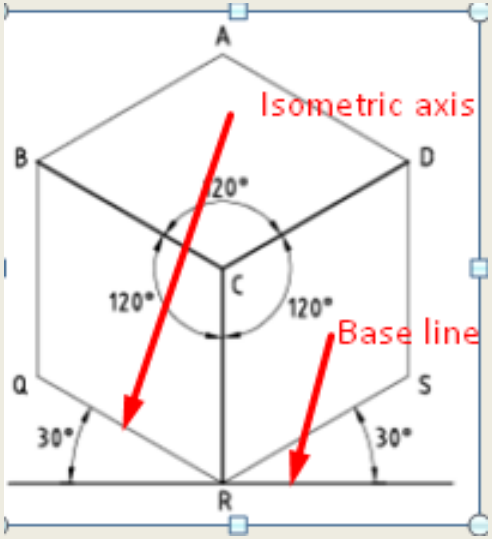
STEP 4
DARKEN THE LINES

Match the correct pair !



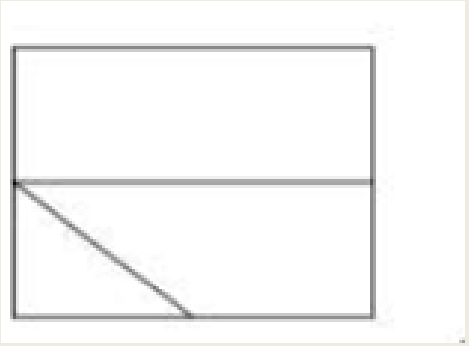
How to draw :

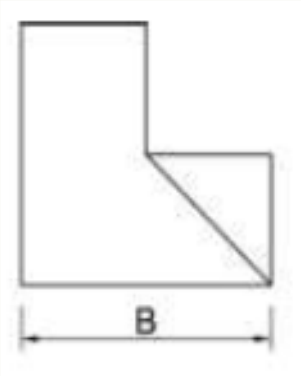
- **Box Method:** A rectangular or square box of suitable size is used to enclose the object in such a way that some of the corners or edges touch the box sides.
- Draw a line 30º with the base line which is called isometric axis

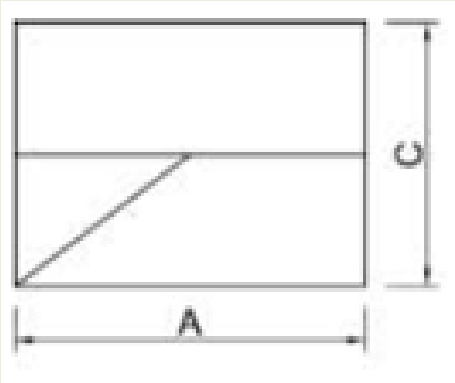


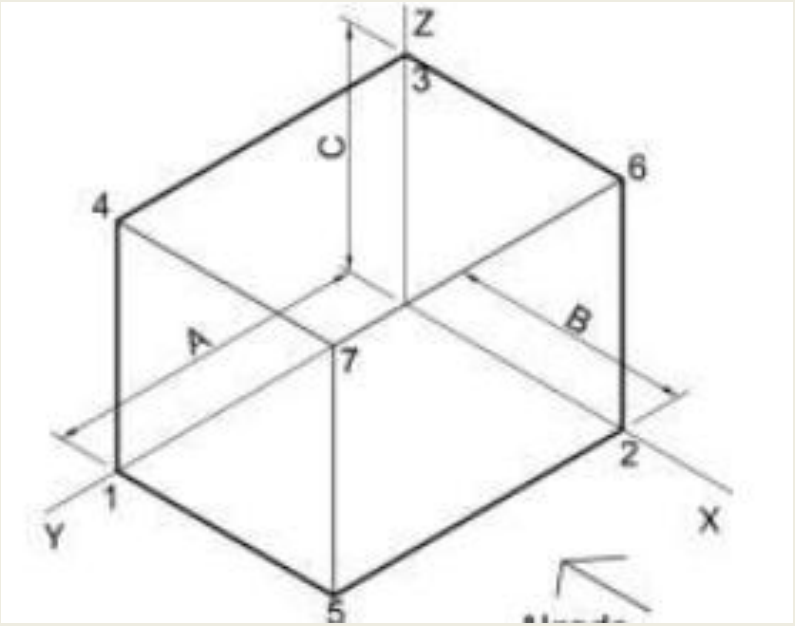
How to draw :

Step 1



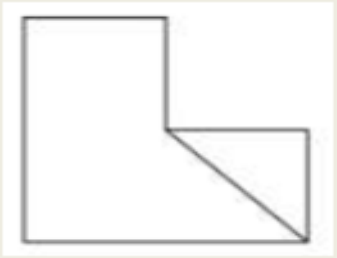


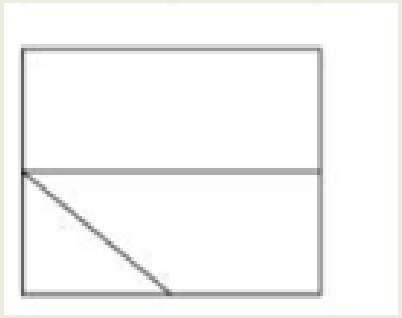


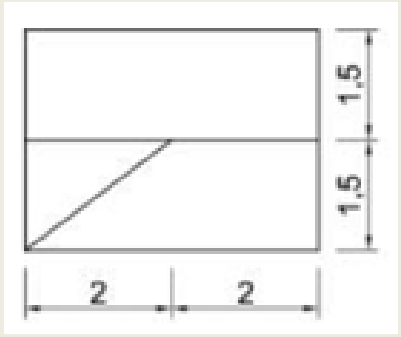


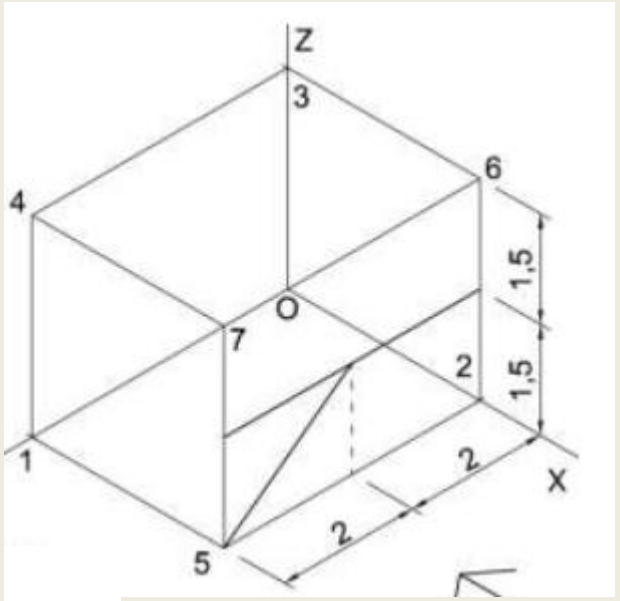
How to draw :

Step 2



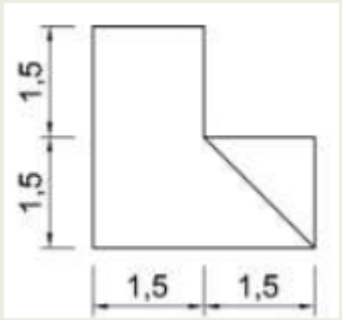


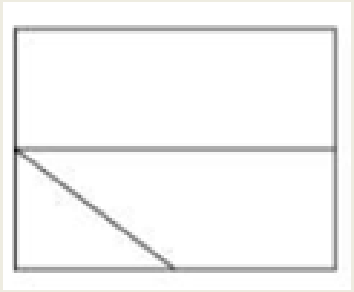


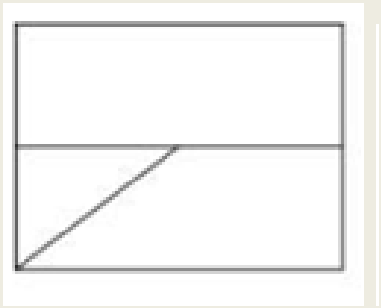


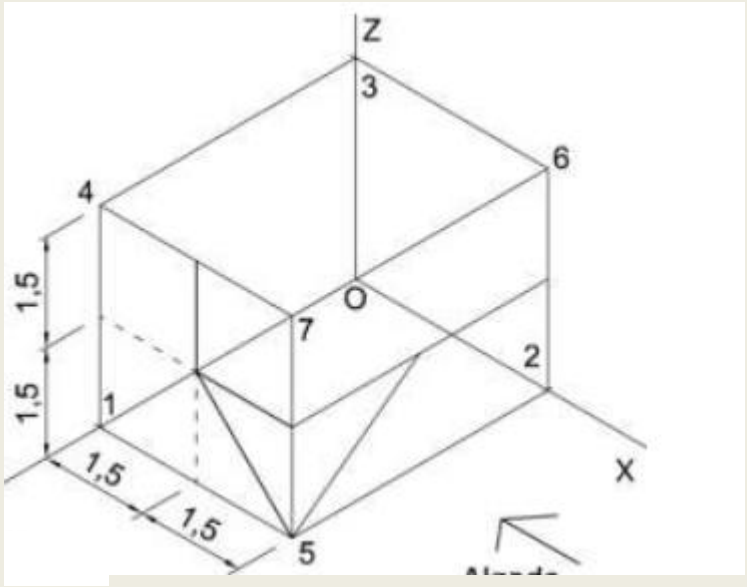
How to draw :

Step 3



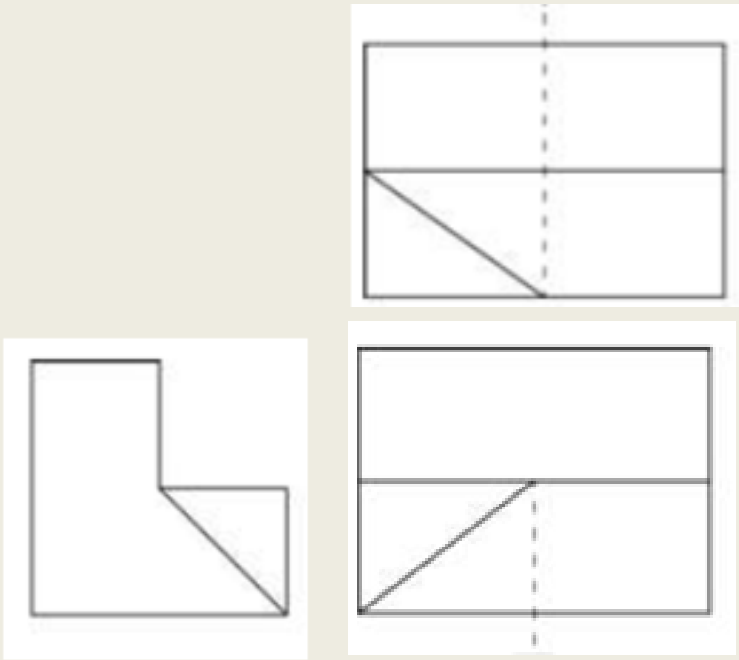


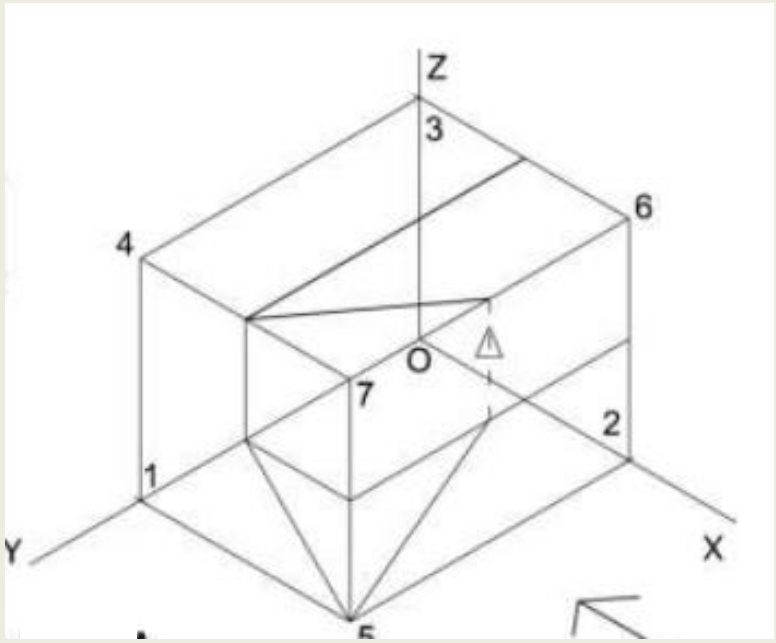




How to draw :

Step 4





Lines

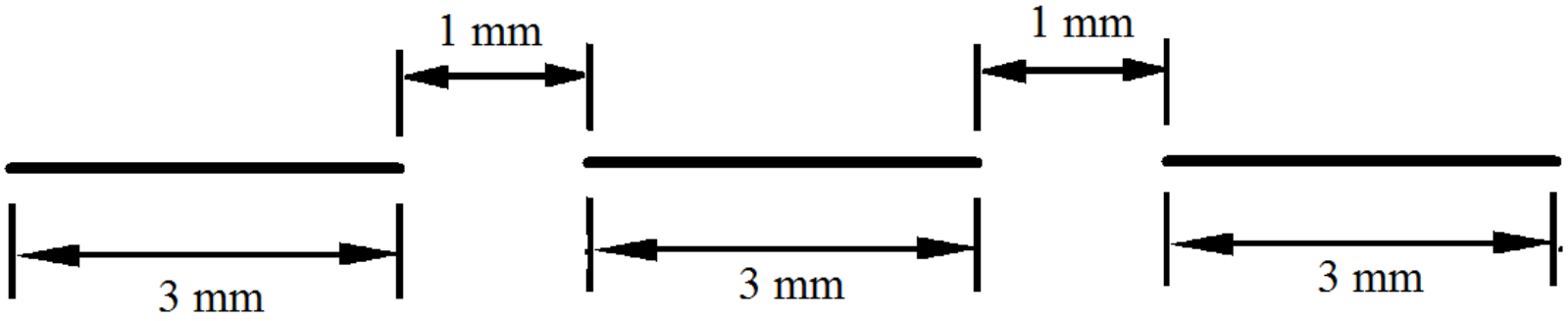
- Object Line : 100% thick
- Hidden Line: 50% thick
- Dimension, Extension Line: 25% thick
- Center Line : 50% thick
- Cutting Plane Line : 125% thick
- Hatchet line :25% thick

Object Line

Thickness: 100 %

Hidden Line

Thickness: 50 %

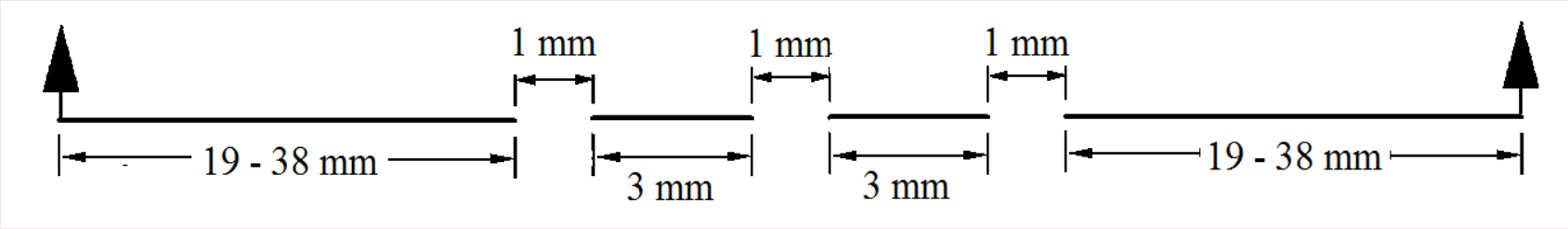


Center Line

Thickness: 50 %

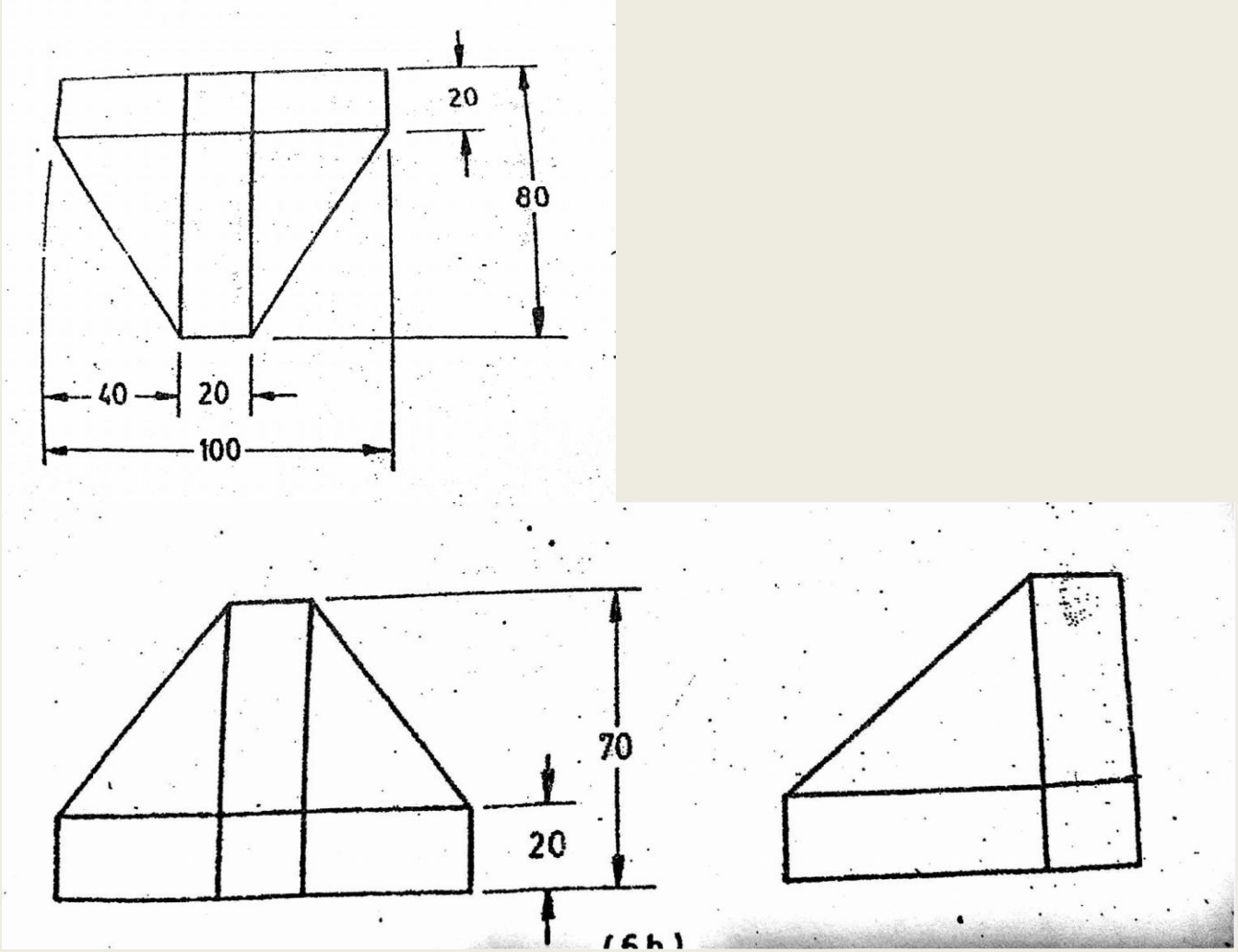
Thickness: 25 %

Thickness: 125 %

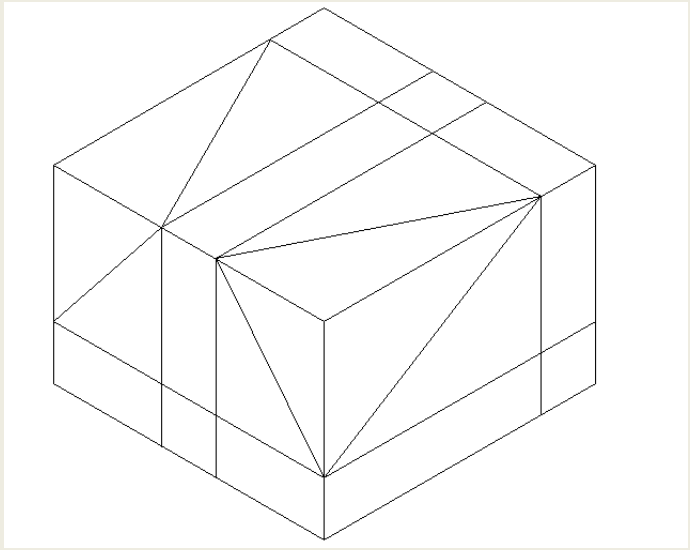


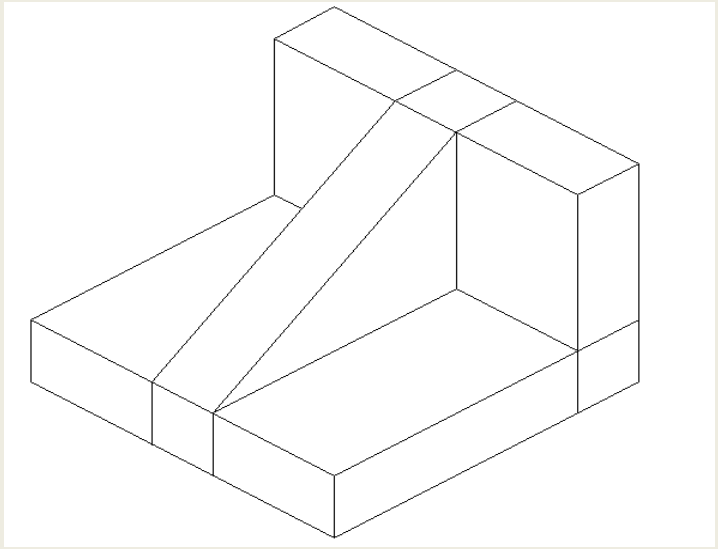
N.B.: All Percentages are with respect to the object line

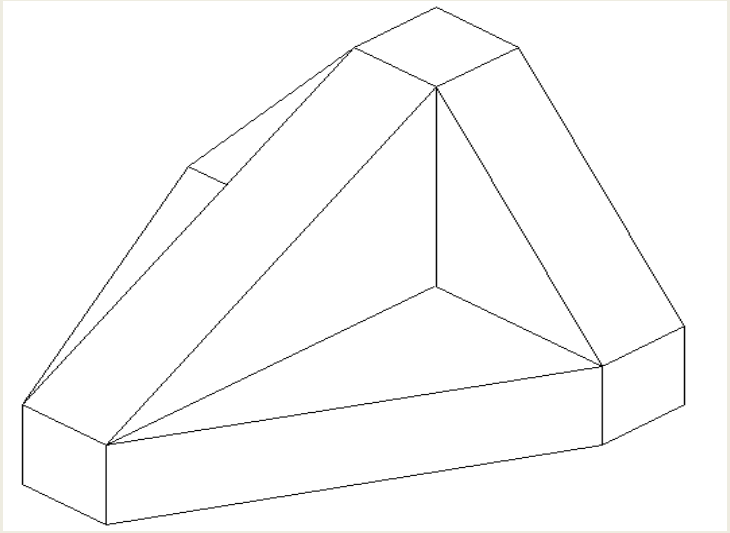
First Problem



First Problem







Persist Until Succeed !!!