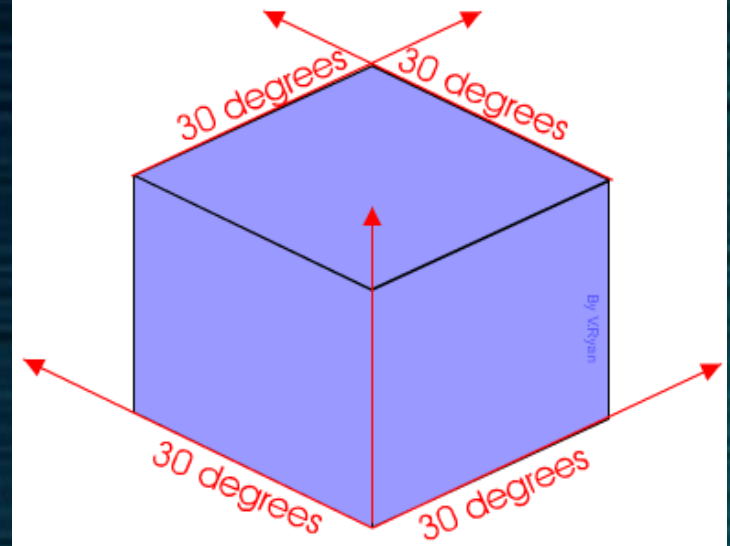


Drawing methods

SECTION ??

Isometric

Isometric drawing is way of presenting designs/drawings in three dimensions. In order for a design to appear three dimensional, a 30 degree angle is applied to its sides. The cube opposite, has been drawn in isometric projection.



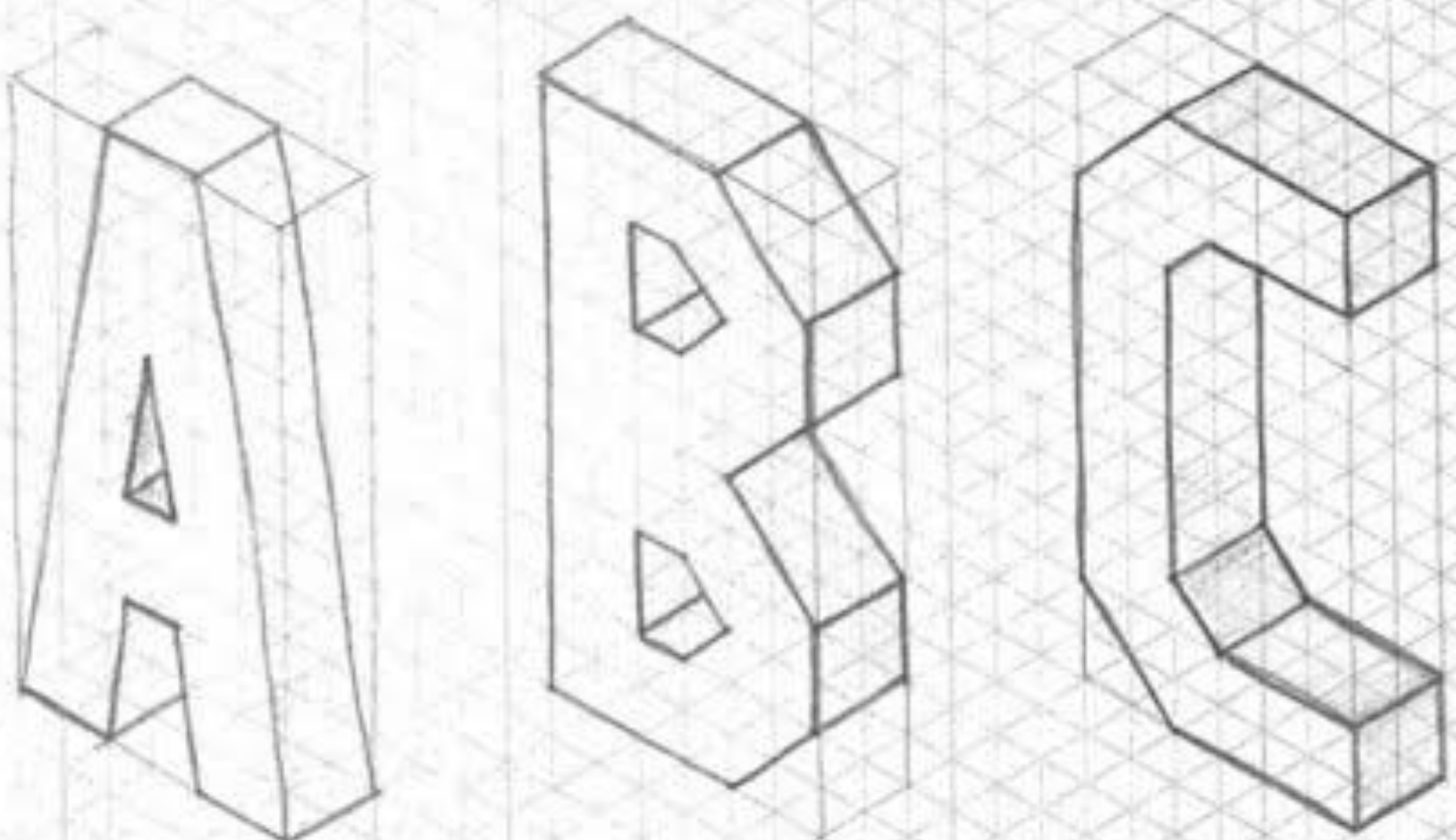
Homework 1

Using the isometric projection paper draw down a series of shapes or letters.

Developing – in Isometric draw simple cuboid shapes in isometric

Good – Draw some basic letters in isometric, keep the shapes blocky.



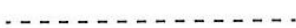


Exceptional – Draw letters that make up your name and try to include some curved shapes.



Drawing methods

Line types and title block

To make sure a drawing is easy to understand and follow, different line types and thickness are used. The table and the image below show the most common ones found in Engineering drawings.

	Thick line used for outlines of shapes and components to make them stand out
	Thin line used for construction, hatching and dimension lines
	Dash line used to show hidden detail in a drawing
	Chain lines used for centre lines
	Chain lines with thick ends and wide, filled-in arrow heads used to show position of sectioning

A title block is located in the bottom corner of the drawing



The **title block** is normally located at the bottom of the drawing with the parts list located on the bottom right hand side of the drawing. The title block should include the following information:

- the title of the drawing
- the name of the person who did the drawing
- the date of the drawing

Figure 6.2.3 Example of title block and parts list

- the drawing number
- the scale of the drawing.

Homework 2

Using the grid paper draw a letter in Isometric projection that includes the correct line types and that includes a title block with all the relevant information.

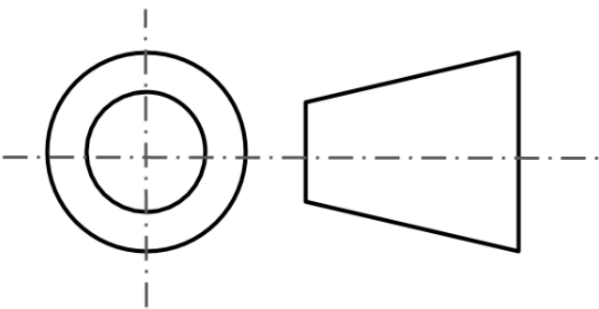
Drawing methods

SECTION ??

Orthographic projection

Orthographic project is a drawing that shows the Front, plan and side view of an object. The drawing all line up so users can see details of the object and how they relate to each other. The top or plan view needs to be at the top and below that you have the front view, then to the side of the front view you have the side view.

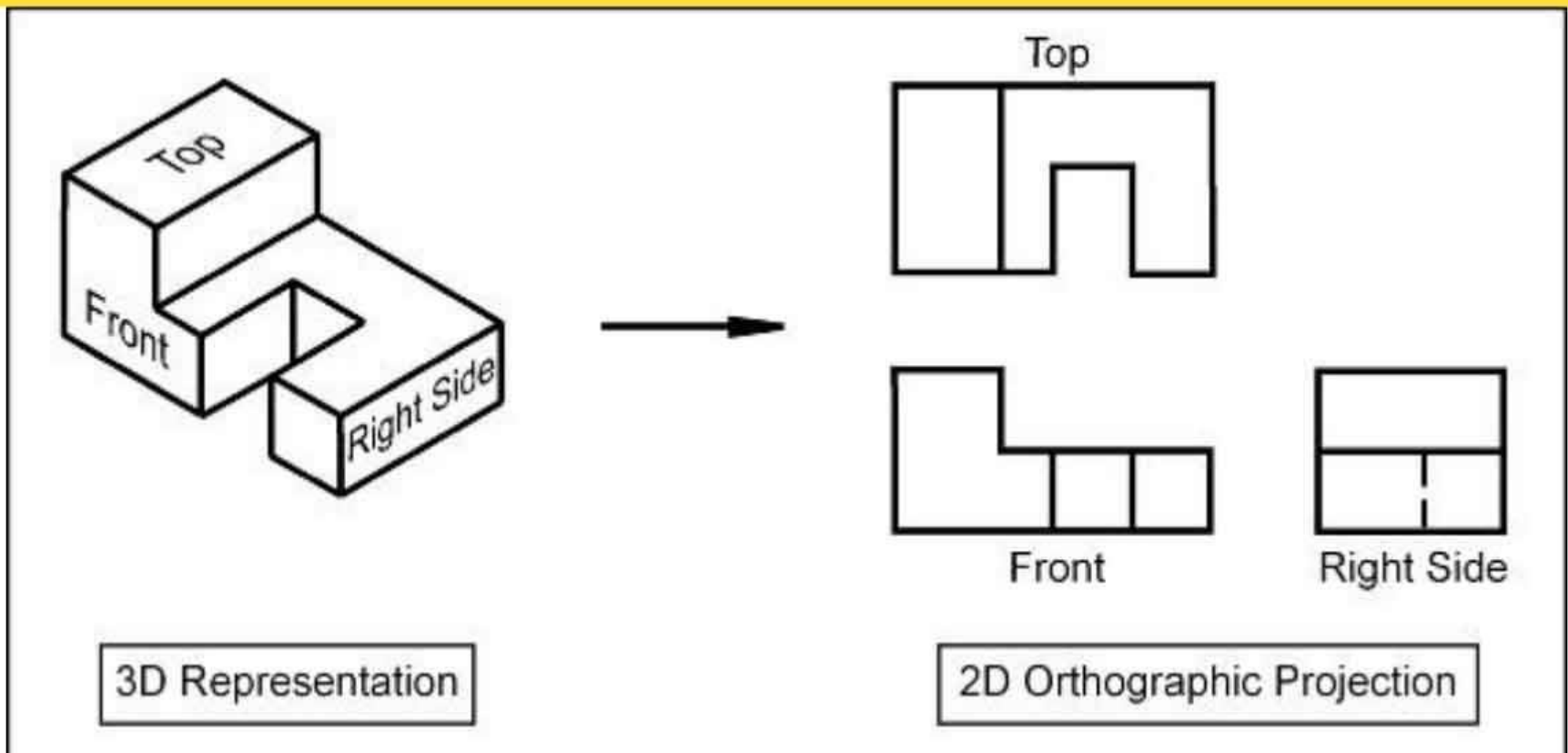
An orthographic drawing is represented by having the symbol below so that people know it is an Orthographic drawing.



Homework 3

Using the grid paper draw a letter in orthographic that includes the correct line types.

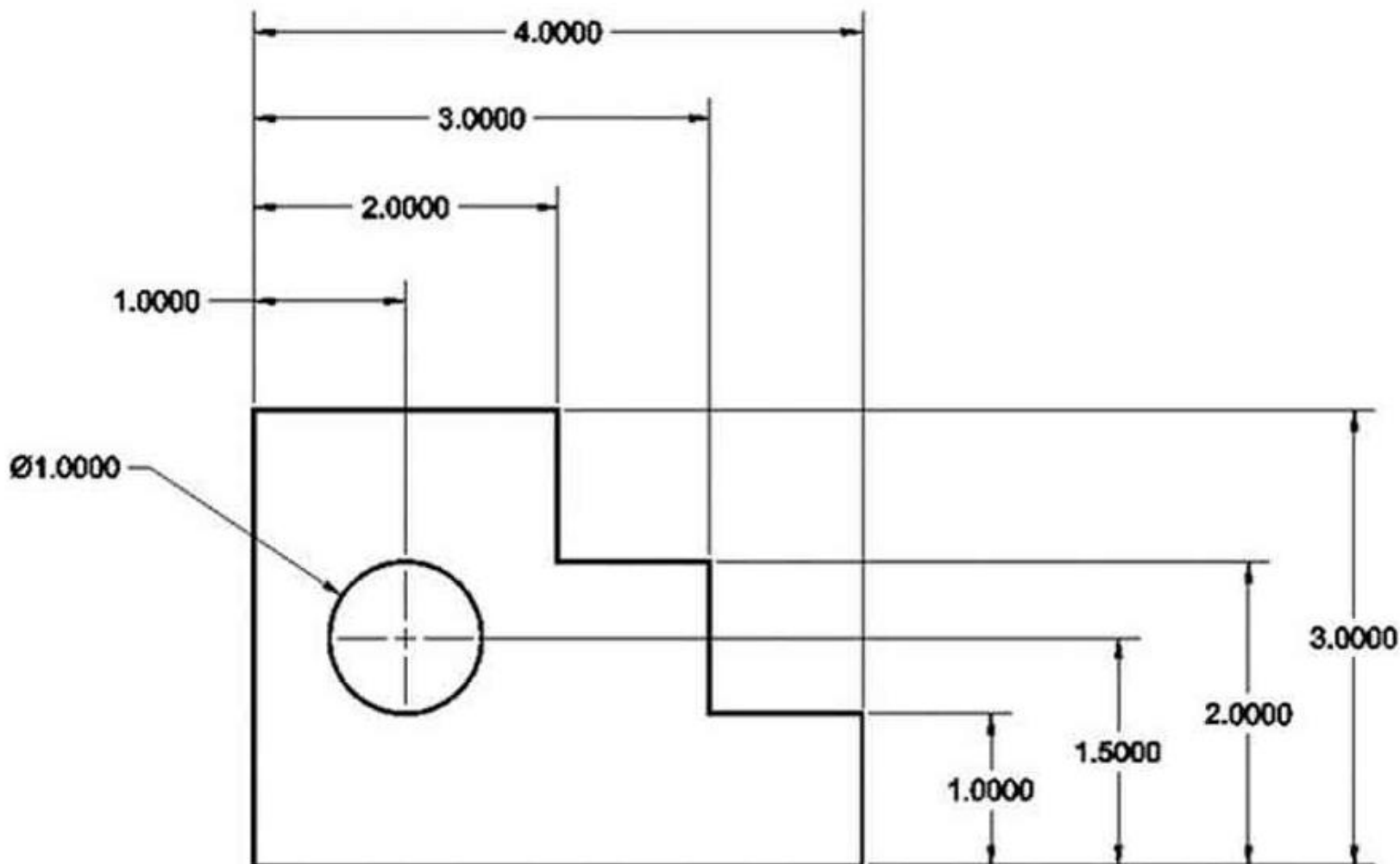
ORTHOGRAPHIC PROJECTION.



Dimensioning a drawing

Dimension lines on drawings are used to show the size of an object.

They are usually represented by a line with an arrow head on each end of the line and then a number in the middle of the line showing the length of the line. At the end of the arrow head there is a thin line showing where the dimension line begins and ends.



All dimension lines are to be placed on the outside edges of the drawing.

Homework 4

Using the grid paper draw an object in orthographic using the correct line types and dimension the drawing to show all of the sizes.

Foundation – student has dimensioned a simple cube

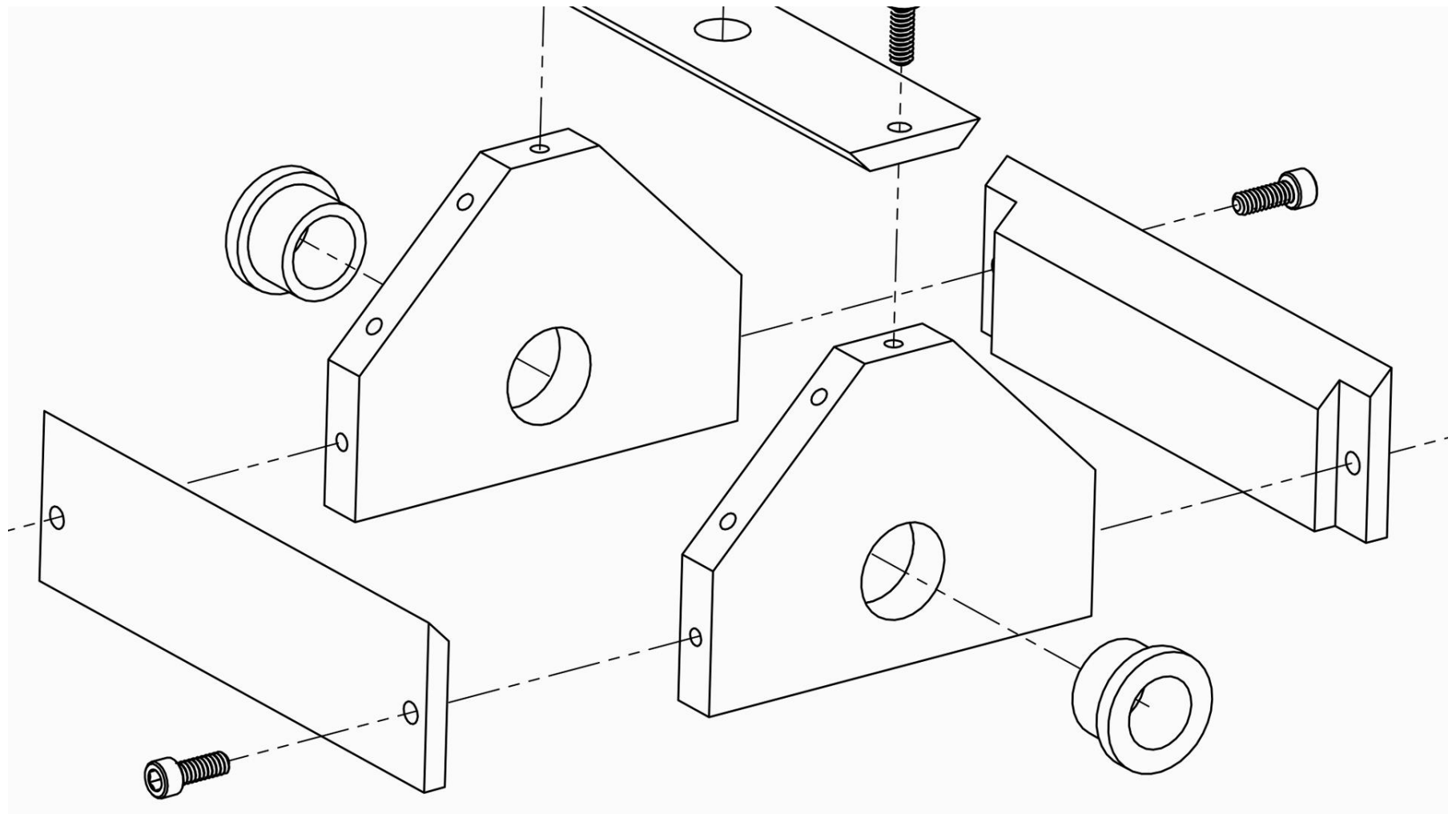
Developing – student has dimensioned an odd shaped cuboid

Good – student has dimensioned a blocky letter

Exceptional – students have dimensioned a letter with curves and straight edges.

Assembly drawings

An assembly drawing also sometimes called exploded drawing is used when many different parts of a product come together. They show exactly how the product should come fit together and help with product assembly.



Homework 5

In isometric projection using the isometric grid paper you need to draw a basic object like the example above to show how it fits together making sure the pieces line up with where they go.

You also need to use the correct lines types and make sure you dimension the drawing correctly.