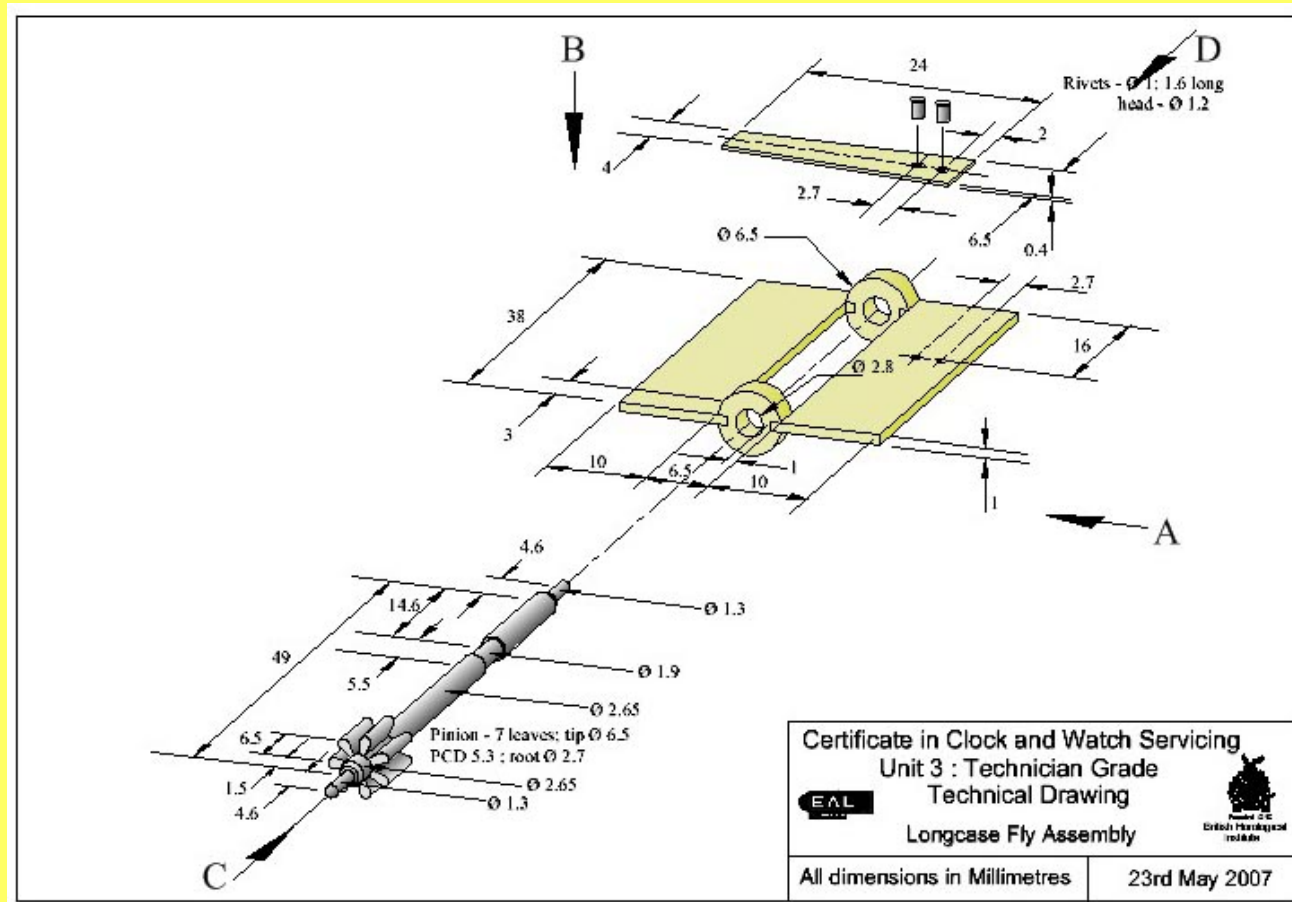


Technical Drawing

The candidate looks at a pictorial view and draws elevations in orthographic projection. These are assessed by considering:-

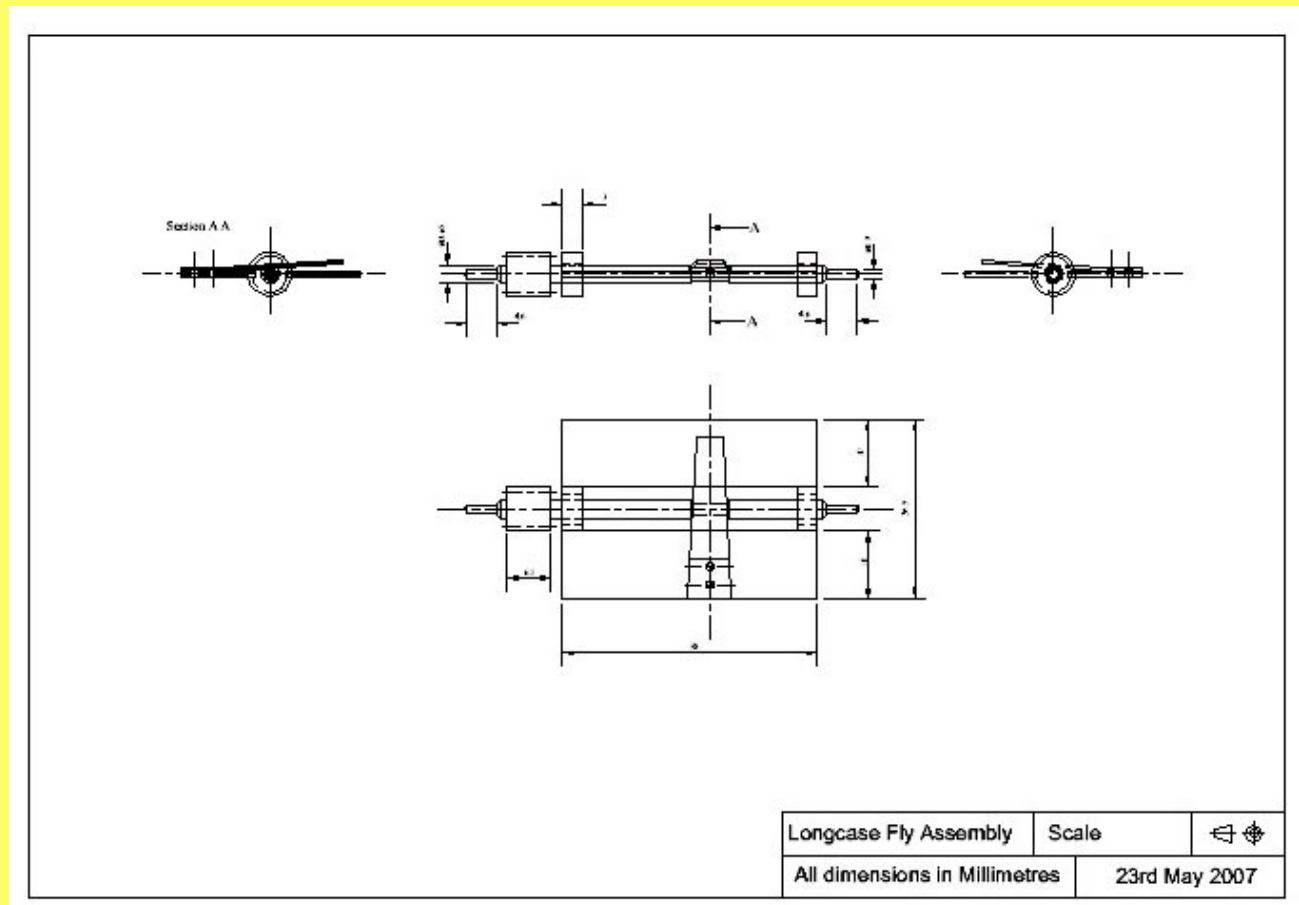
1. Page planning - Projection of elevations, page layout, lettering and title (max. 14%)
- 2 Conventions - Lines, screw threads, sectional view, gears, dimensioning (max. 26%)
- 3 The accuracy of the actual elevations (max.60%)



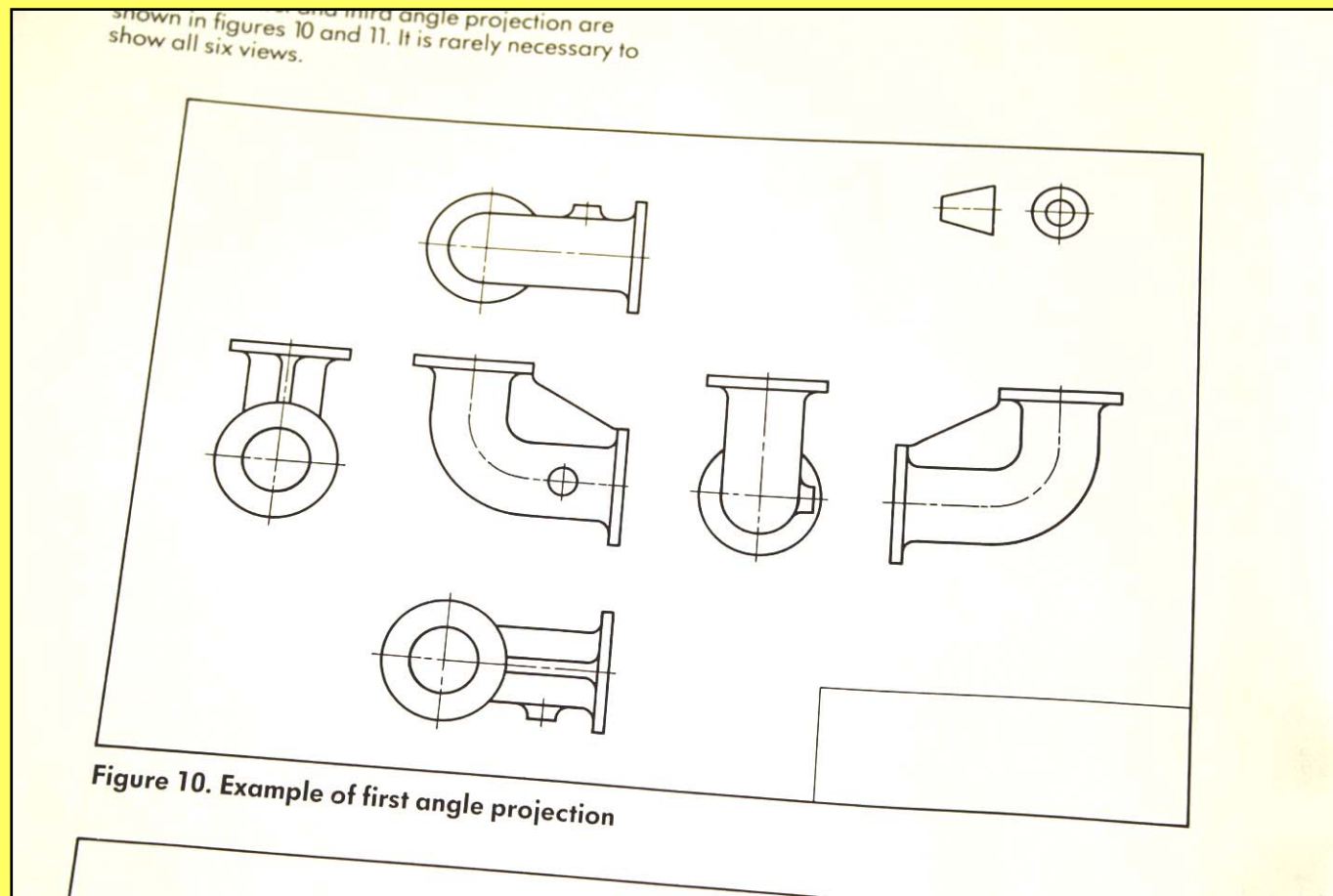
A pictorial drawing is provided and candidates are required to draw two / three / four views in orthographic projection.



This booklet gives details of every aspect of technical drawing that you need to know. (BS 308 (PP 7308))

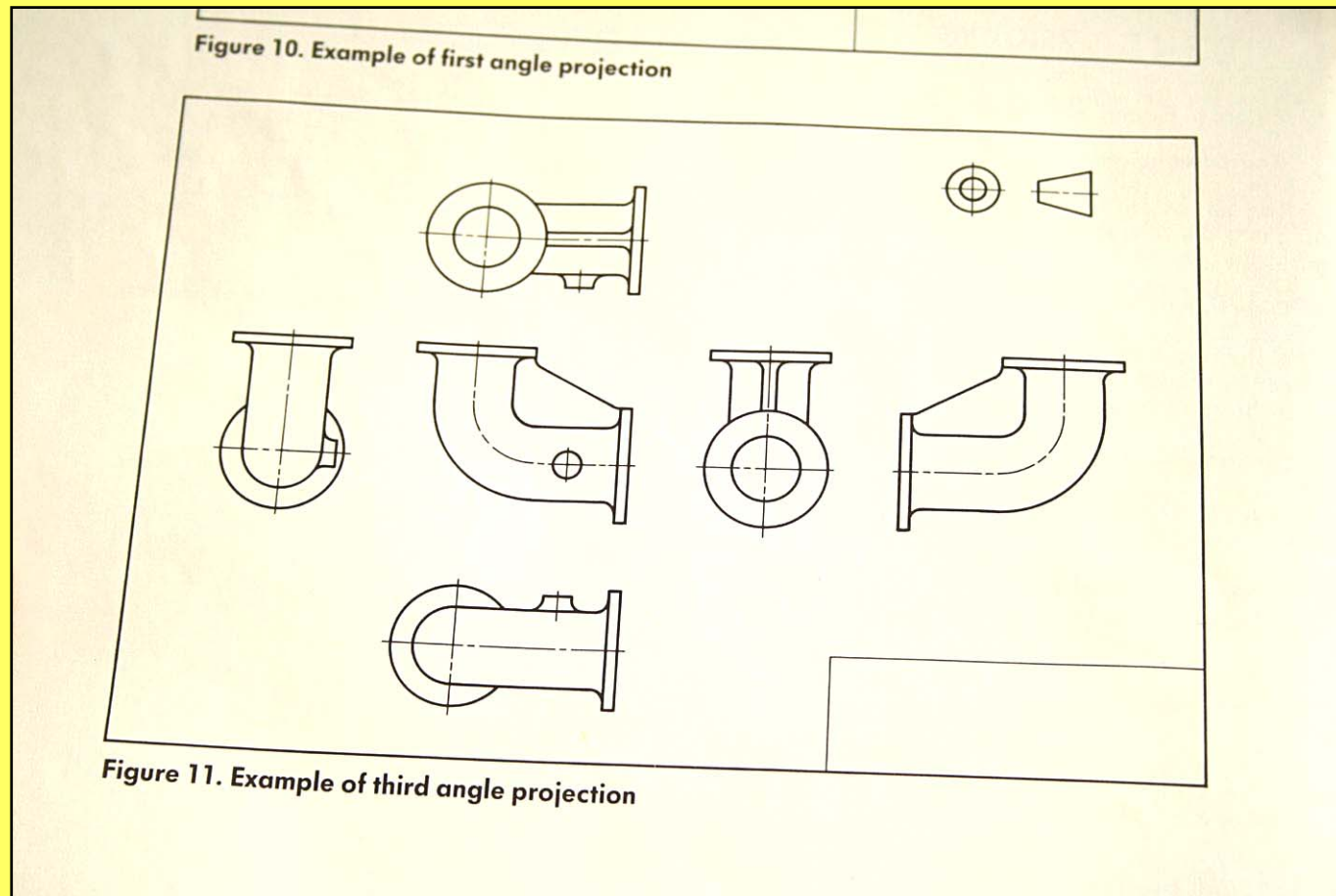


The elevations are not drawn independently, usually the front elevation is drawn first; the other elevations are projected.



There are two approaches - this is First Angle Projection.

The symbol in the top right corner gives the type of projection.

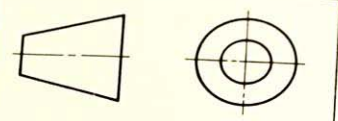
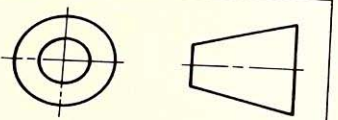


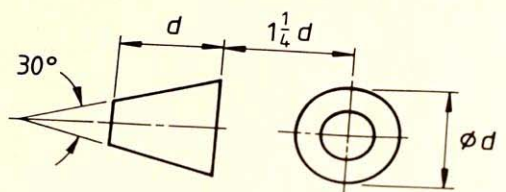
This is Third Angle Projection. Both approaches are correct but you must be consistent and just use one approach.

of viewing should be clearly shown. An arrow and view title may be used, similar to those in figure 12.

Projection symbols

The system of projection used on a drawing should be indicated by the appropriate symbol given in figure 9.

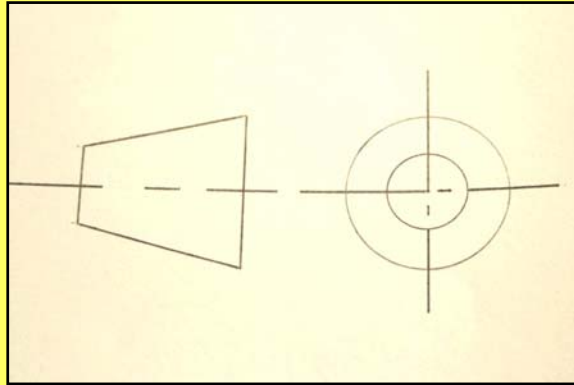
Projection	Symbol
First angle	
Third angle	



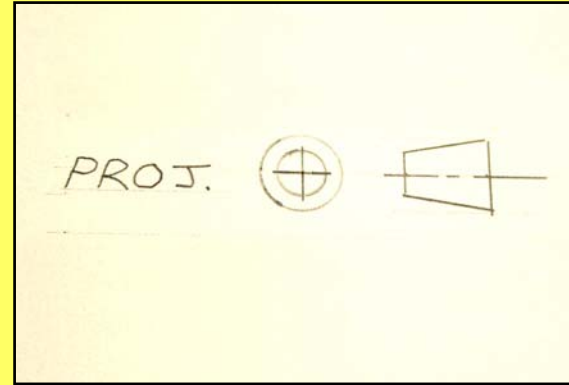
Recommended proportions

Figure 9 Symbol: *(partially obscured)*

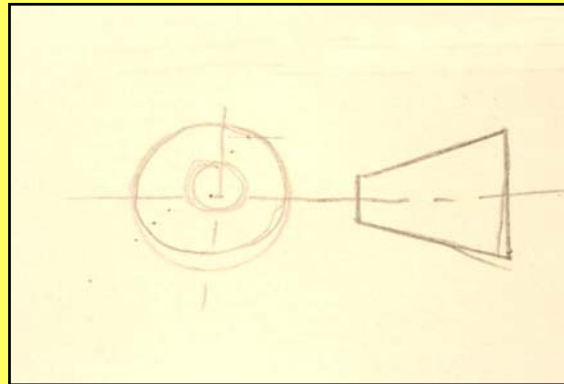
The principle is explained in Engineering Drawing for Schools and Colleges. The symbol is important.



First Angle Projection

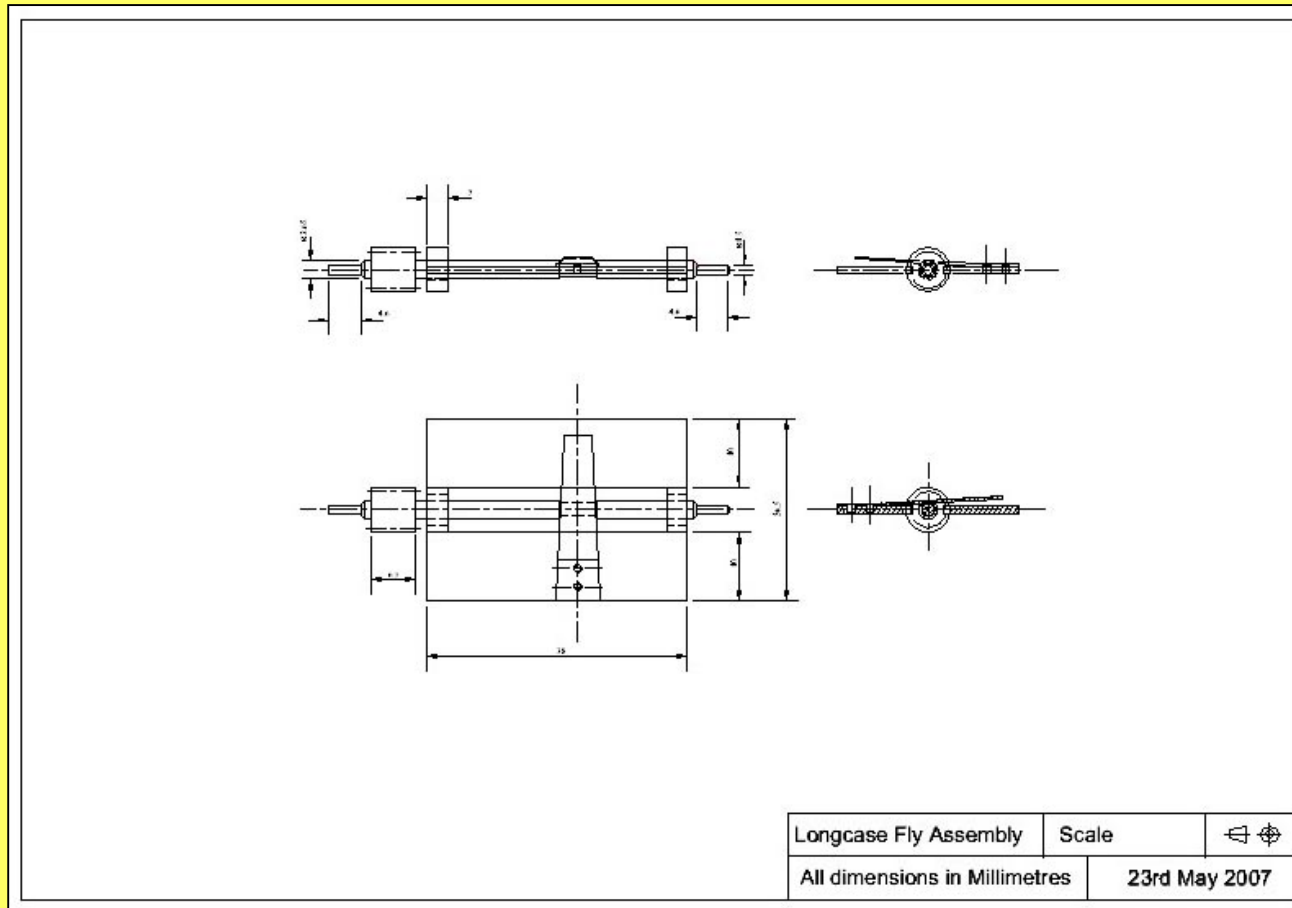


Third Angle Projection

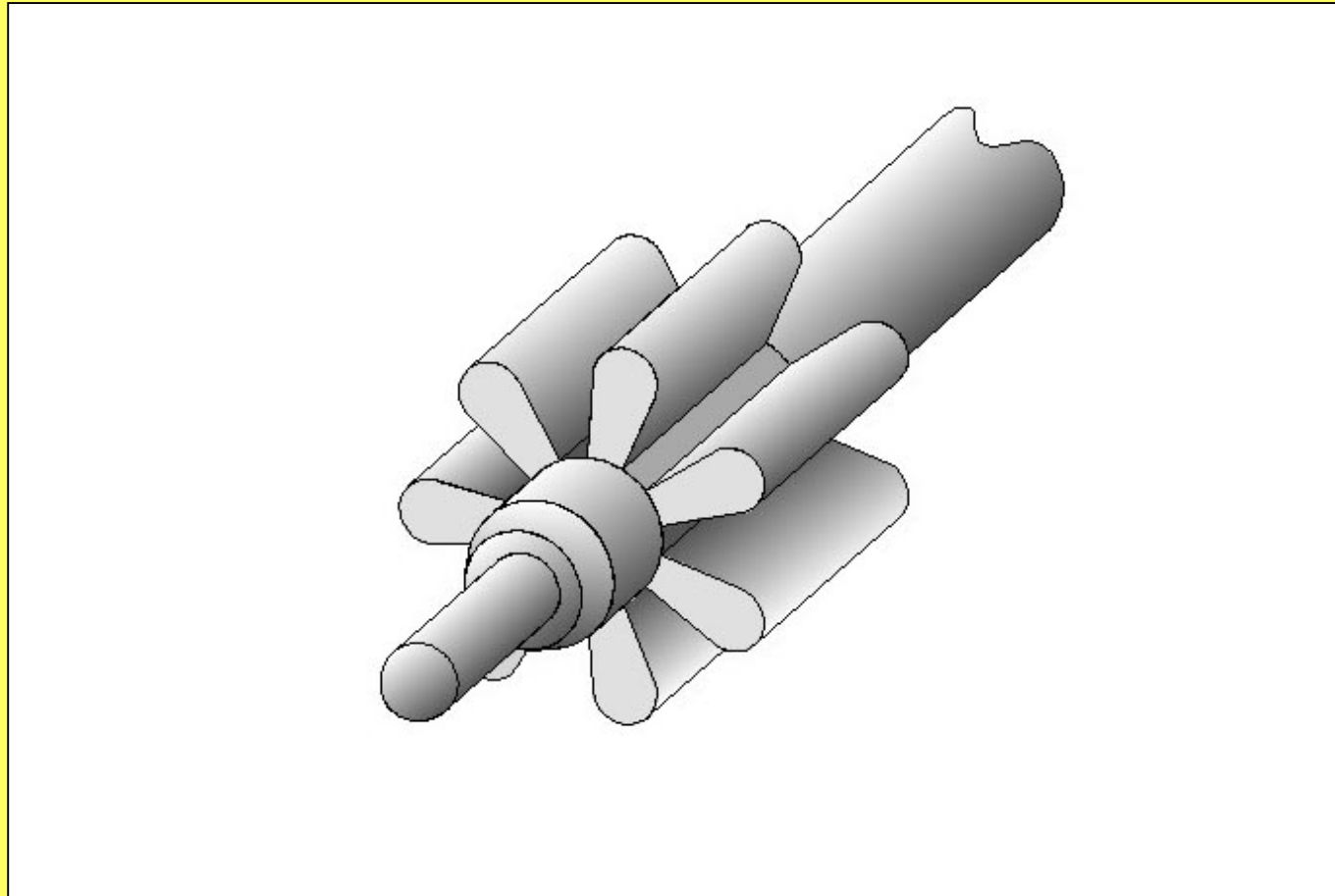


Third Angle Projection

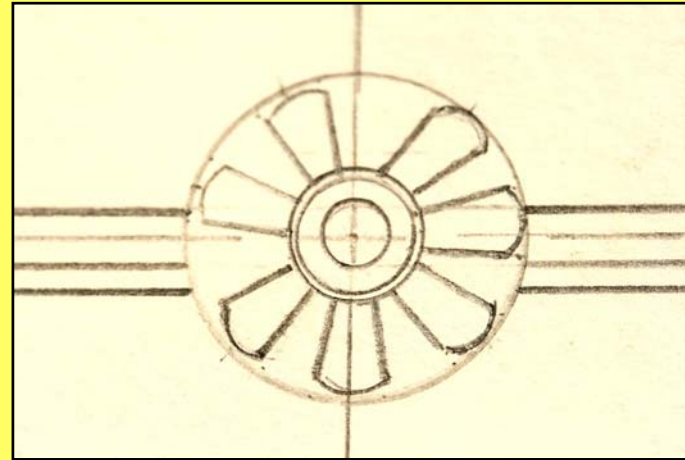
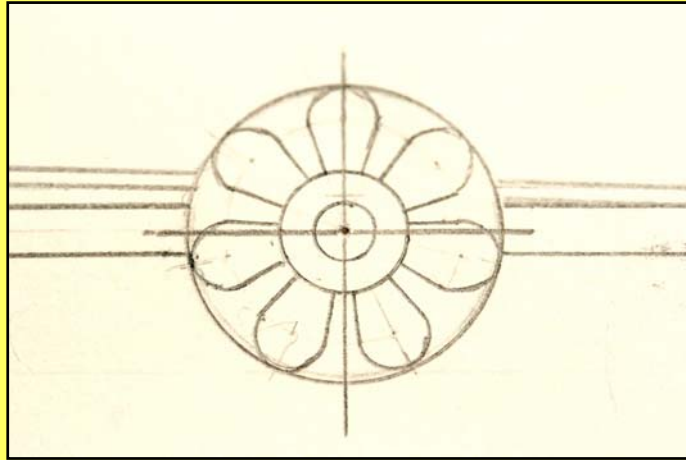
Most drawings show the symbol, the meaning is usually, but not always, fully understood.



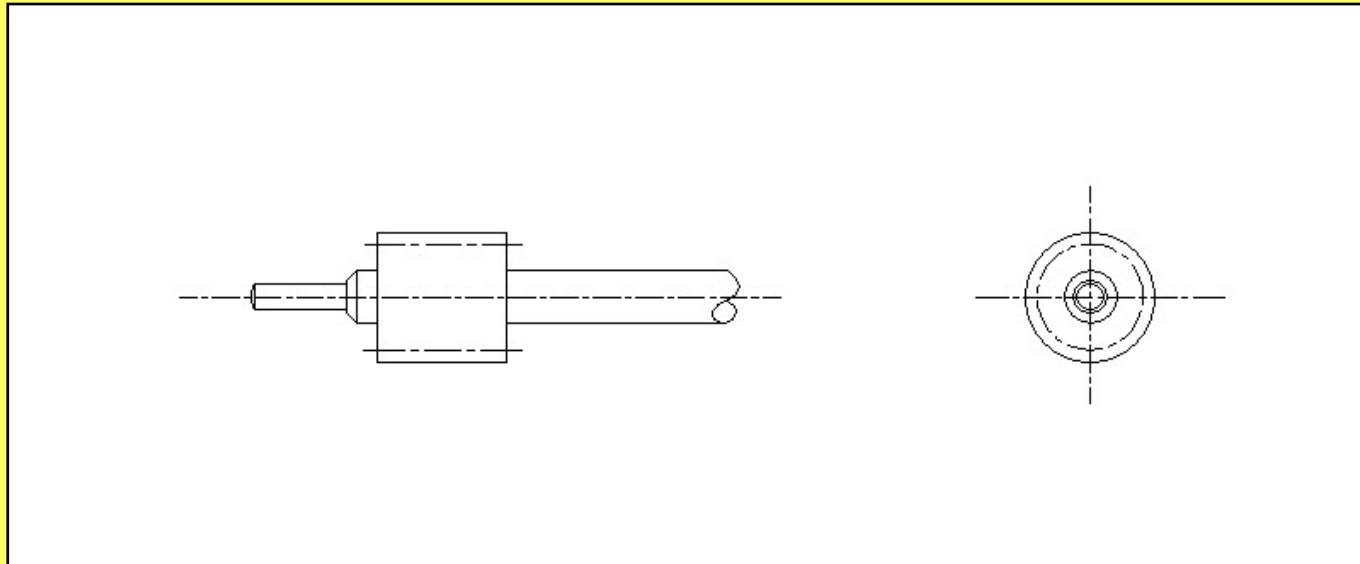
A drawing like this will lose marks; the elevations are not correctly positioned. They are not projected from each other.



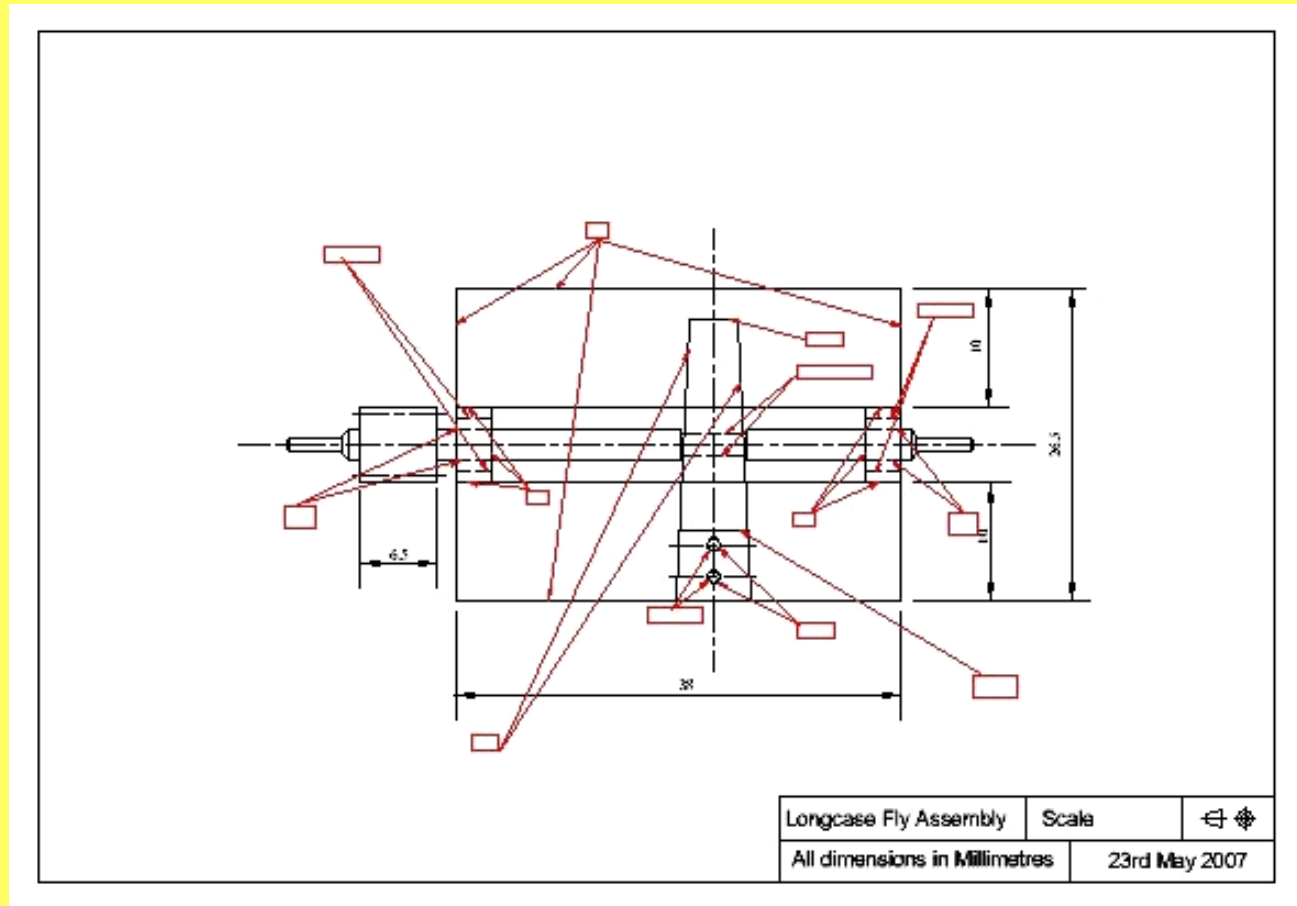
In orthographic projection, it is not correct to draw the leaves of the pinion, there is a quick and simple convention.



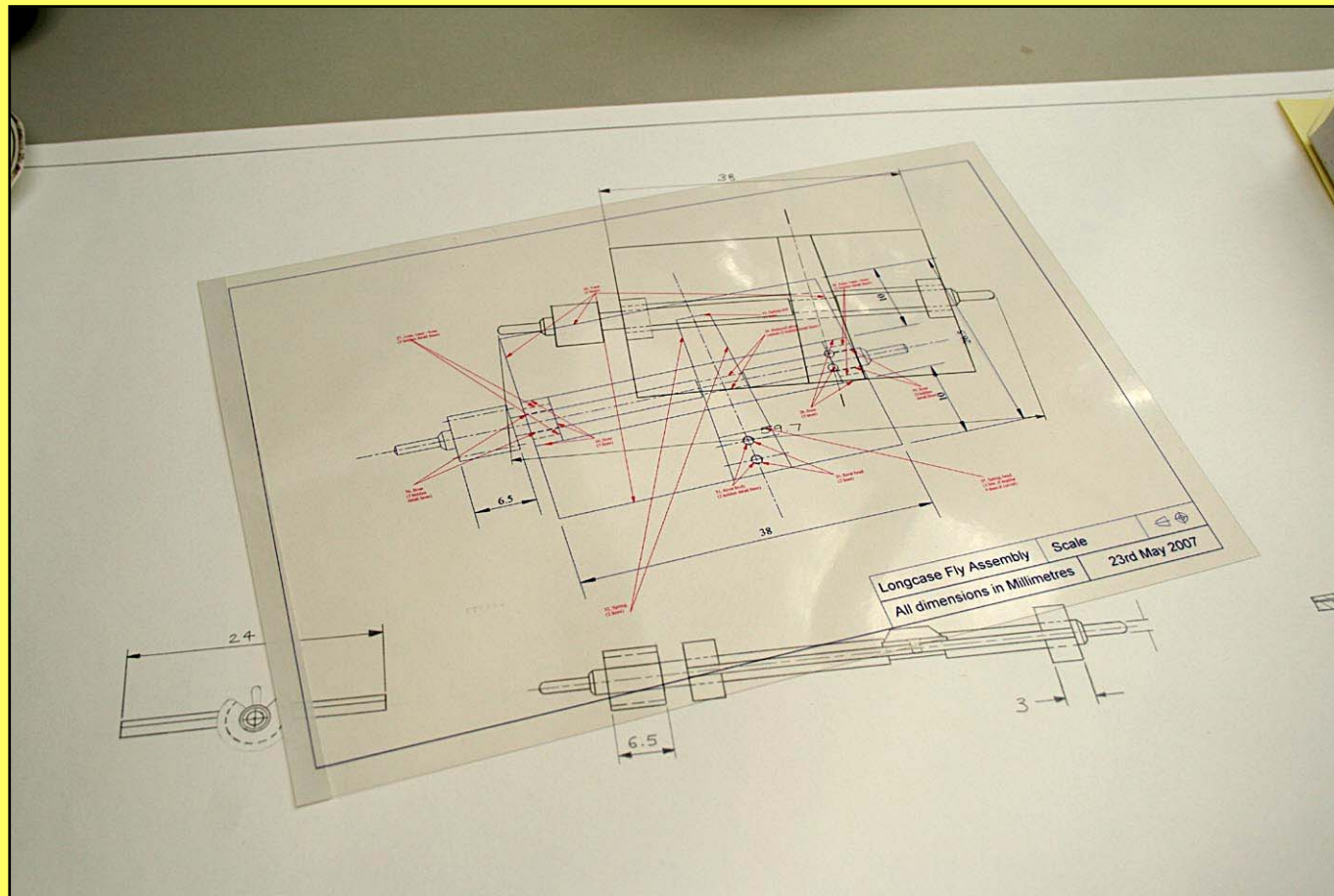
It takes a long time to draw a pinion like this - it is wrong and will lose marks - you must use the convention for gears.



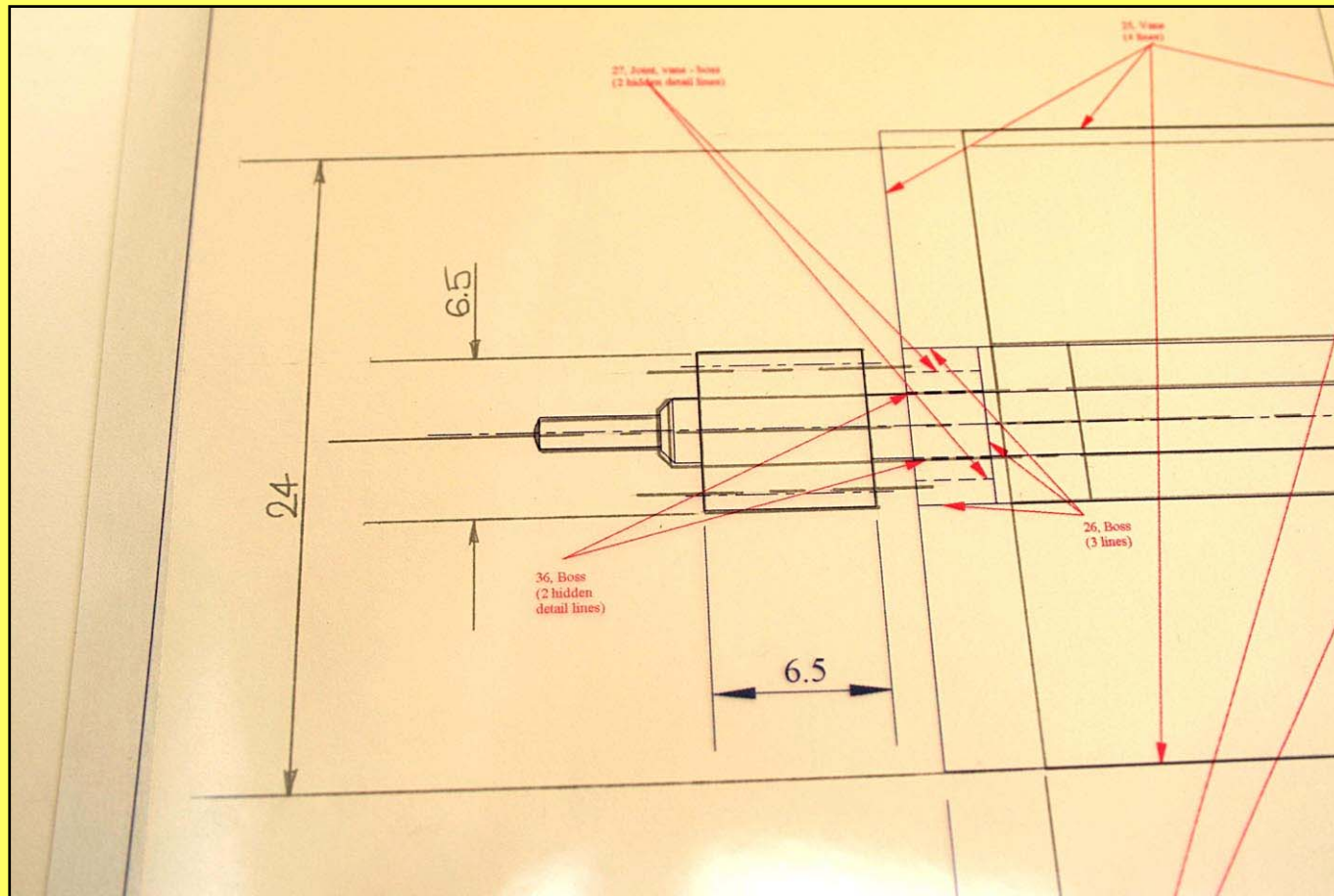
The correct convention is much easier.



A template is drawn very carefully with the various lines numbered, most of the lines are checked with the template.



The template is placed on top of the candidate's drawing to check for accuracy.



It clearly shows which lines are correct and where there are mistakes.



Remember - Page Layout, Use of Conventions, Accuracy.
This booklet tells you everything you need to know.