

## Rules

- Each dimension should be shown on the drawing only once.
- Place the dimensions on your drawing so that they can be read from either the bottom or the right-hand side of the page.
- Always measure in millimetres unless instructed otherwise.
- Figures should not touch outlines, dimension lines or centre lines
- $\varnothing$  before a dimension denotes the diameter of a circle. R denotes radius.
  - on circles, always dimension the diameter, never the radius
  - On curves, arcs and rounded corners, always show the radius

# Dimensioning

## Rules

### Leader lines:

Leave a small gap to avoid confusing the leader line with the outline of the drawing.

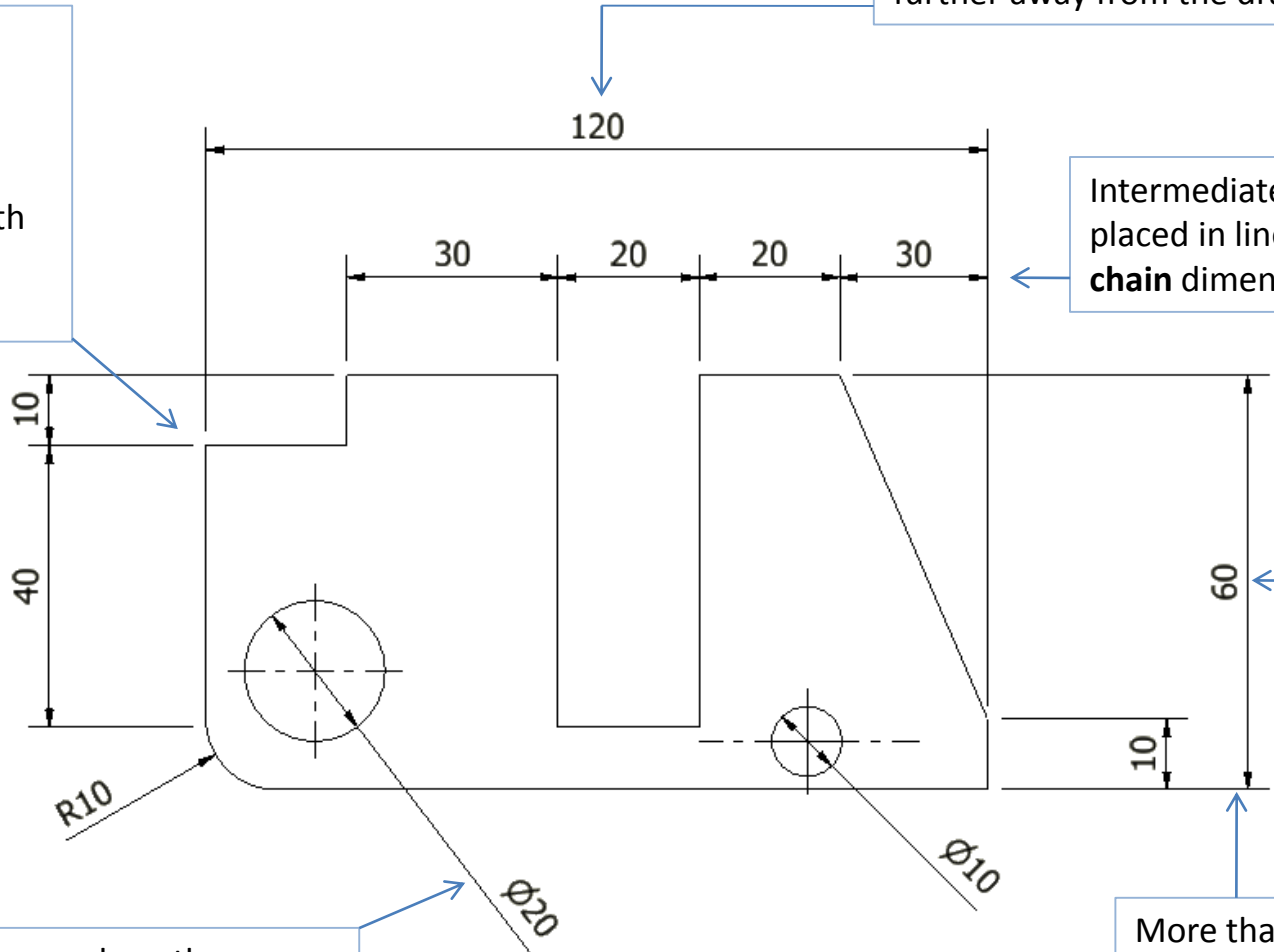
Overall dimensions are placed further away from the drawing

Intermediate dimensions are placed in line. This is known as **chain** dimensioning

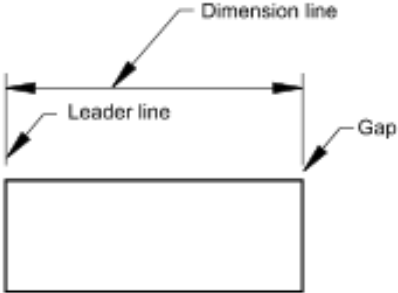
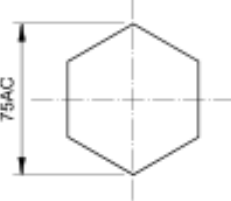
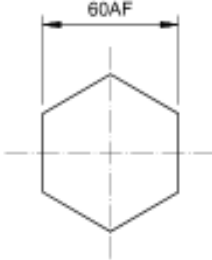

Figures on vertical dimension lines are read from the right-hand side.

Always show the diameter of a circle, never its radius.

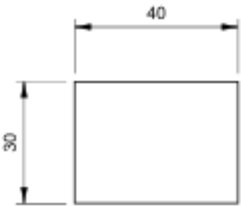
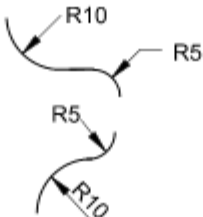
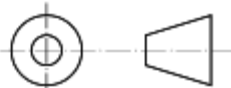
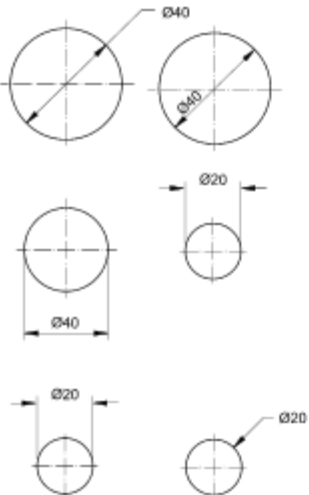
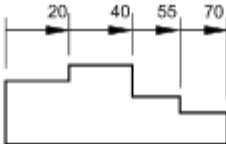
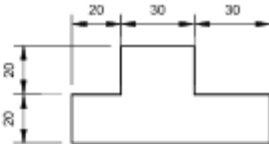
More than one dimension can be taken from a single line. This line is called the datum line



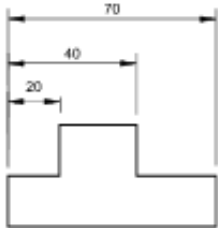
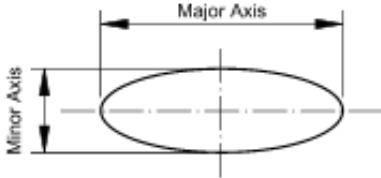
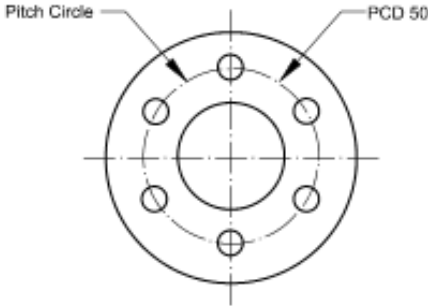
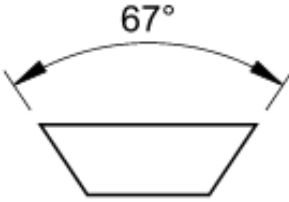
# Dimensioning

Leader line	Across corners	Across flats	Square
 <p data-bbox="369 825 749 1018">Narrow lines which lead from points on a view to the arrowhead dimension lines. A small gap should be left between the view and the leader line.</p>			

# Dimensioning

Linear	Radial	Projection symbol
 <p>A rectangular object with a width of 40 and a height of 30. Dimension lines with arrows indicate the measurements.</p>	 <p>Two curved lines representing radii. The top curve is labeled R10 and the bottom curve is labeled R5. Dimension lines with arrows indicate the radii.</p>	 <p>3rd angle projection symbol showing a circle and a truncated cone. The text "3rd angle projection" is written below the symbol.</p>
Diameter	Running	Chain
 <p>Four circular views of a stepped shaft. The top two views show diameters of <math>\varnothing 40</math> and <math>\varnothing 20</math>. The bottom two views show diameters of <math>\varnothing 40</math> and <math>\varnothing 20</math>. Dimension lines with arrows indicate the diameters.</p>	 <p>A stepped shaft with four steps. The dimensions for the steps are 20, 40, 55, and 70. Dimension lines with arrows indicate the lengths of the steps.</p>	 <p>A stepped shaft with three steps. The dimensions for the steps are 20, 30, and 30. Dimension lines with arrows indicate the lengths of the steps.</p>

# Dimensioning

Parallel	Major and minor axis
 <p>A technical drawing of a stepped shaft. It shows a shaft with a diameter of 70. A section of length 40 has a diameter of 20. The drawing uses dimension lines and arrows to indicate these parallel dimensions.</p>	 <p>A technical drawing of an ellipse. The horizontal axis is labeled "Major Axis" and the vertical axis is labeled "Minor Axis". Dashed lines represent the center and the axes.</p>
Pitch circle diameter	Angular dimension
 <p>A technical drawing of a circular part with six holes. A dashed circle is labeled "Pitch Circle" and "PCD 50". The drawing uses dimension lines and arrows to indicate the pitch circle diameter.</p>	 <p>A technical drawing of a trapezoid. The top angle is labeled "67°". The drawing uses dimension lines and arrows to indicate the angular dimension.</p>