

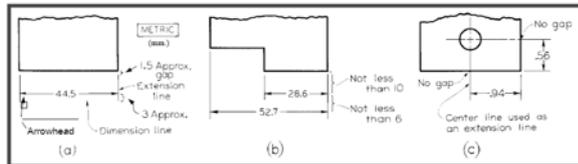


ME111 ENGINEERING GRAPHICS

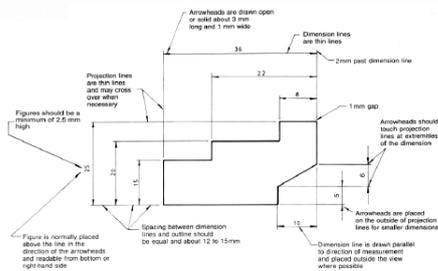
SESSION 3: Dimension

Dr.-Ing. Thira Jearsiripongkul
FACULTY OF ENGINEERING, THAMMASAT UNIVERSITY

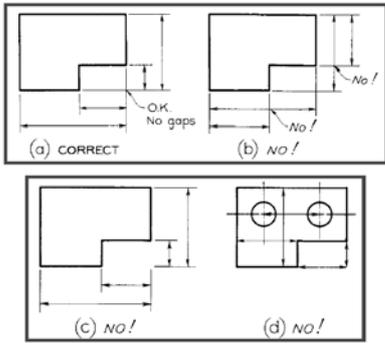
Placement of Dimension and Extension Lines



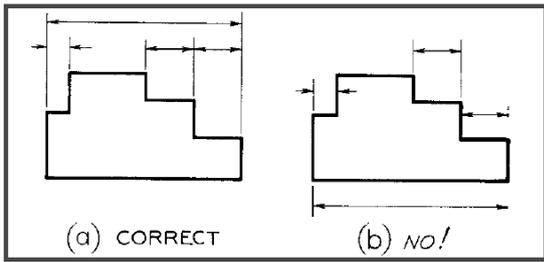
Use of projection and dimension lines



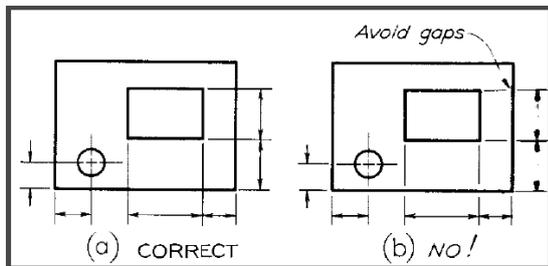
Examples



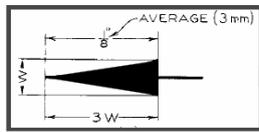
Grouped dimensions



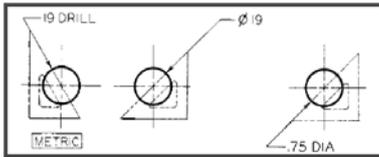
Crossing lines



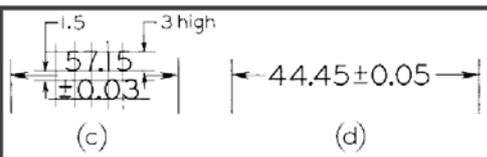
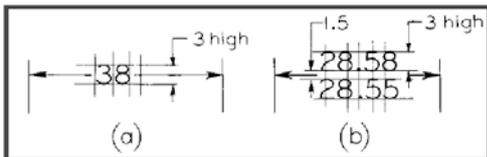
● Arrowhead.



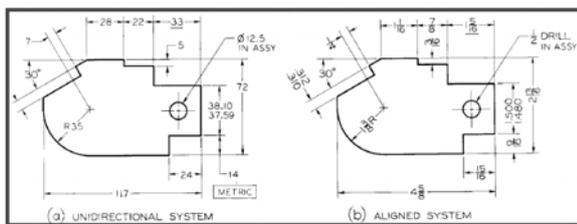
● Leaders.



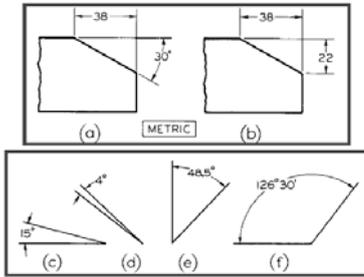
● Dimension figures.



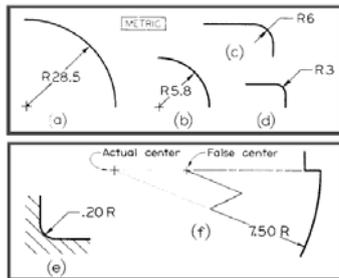
● Directions of dimension figures.



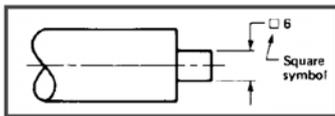
● Dimension angles.



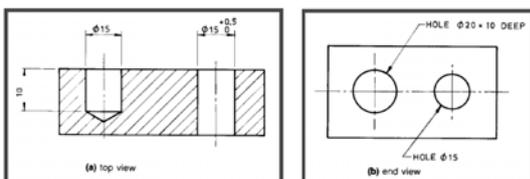
● Dimension arcs.



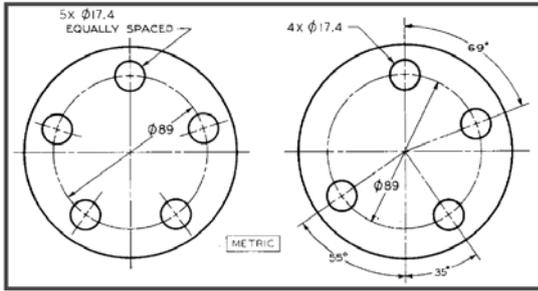
● Square symbol.



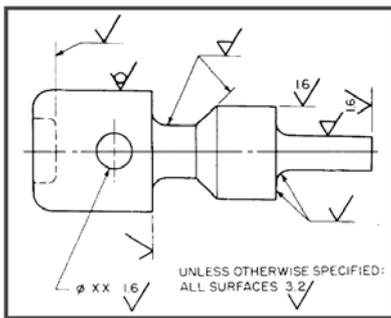
● Hole symbol.



● Hole symbol.



● Surface texture symbol.



● Surface texture symbol.

Symbol	Meaning
(a) ✓	Basic Surface Texture Symbol. Surface may be produced by any method except when the bar or circle, (b) or (d), is specified.
(b) ✓	Material Removal by Machining is Required. The horizontal bar indicates that material removal by machining is required to produce the surface and that material must be provided for that purpose.
(c) 3.5 ✓	Material Removal Allowance. The number indicates the amount of stock to be removed by machining in millimeters (or inches). Tolerances may be added to the basic value shown or in a general note.
(d) ✓	Material Removal Prohibited. The circle in the use indicates that the surface must be produced by processes such as casting, forging, hot finishing, cold finishing, die casting, powder metallurgy or injection molding without subsequent removal of material.
(e) ✓	Surface Texture Symbol. To be used when any surface characteristics are specified above the horizontal line or to the right of the symbol. Surface may be produced by any method except when the bar or circle, (b) or (d), is specified.
(f)	<p>LETTER HEIGHT - X</p>

● Geometric tolerancing symbol.

