

Working Drawings

Working Drawings

- Detailed part or assembly drawing
- Complete information for construction
- Shape, Dimensions, Specifications

Dimensioning Example

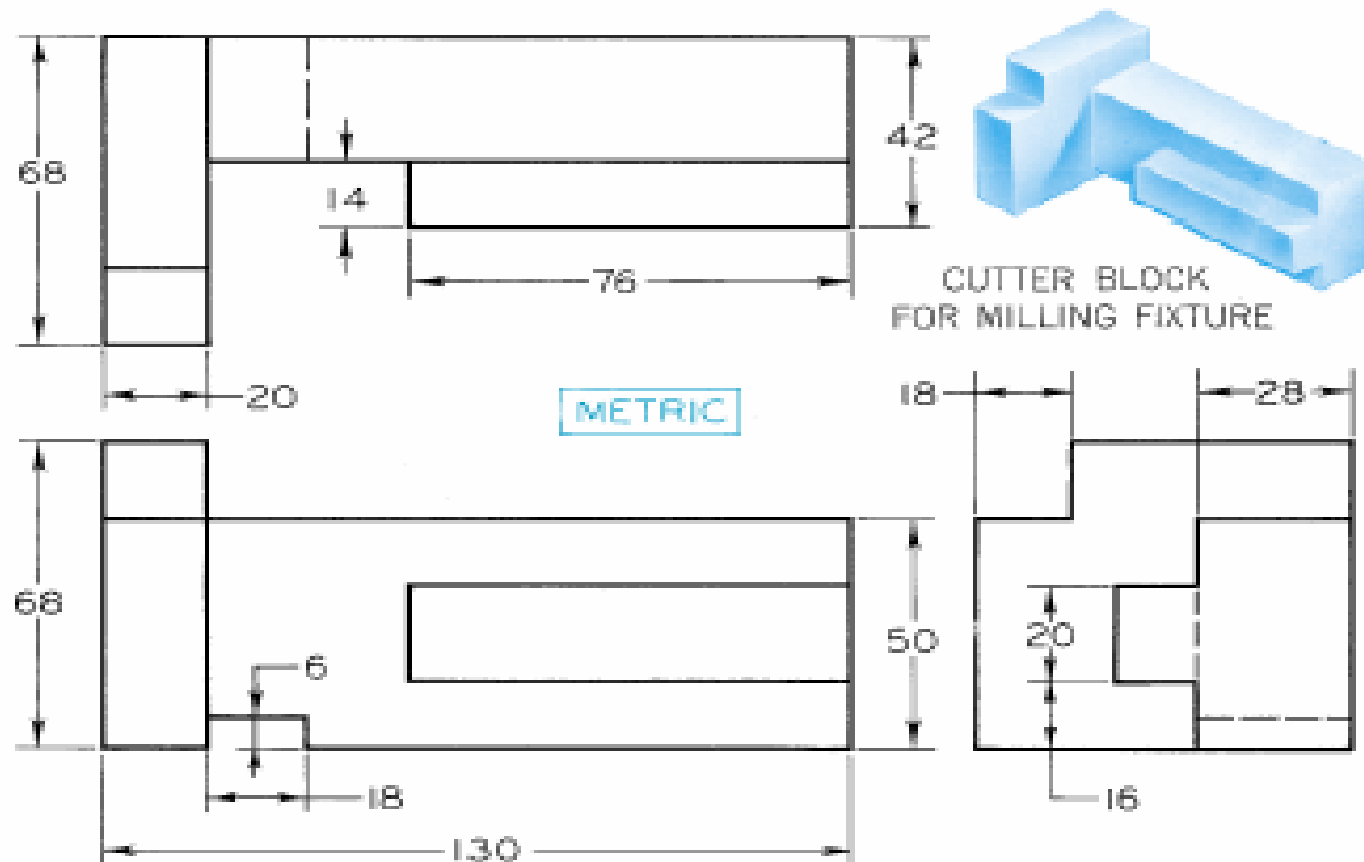


FIGURE 12.25 Dimensioning a Machine Part Composed of Prismatic Shapes.

Dimensioning

- **Placement**
 - **Unidirectional (preferred)**
 - **Aligned**
- **Dimension Lines**
- **Extension Lines**
- **ASME Y14.5**

Unidirectional and Aligned

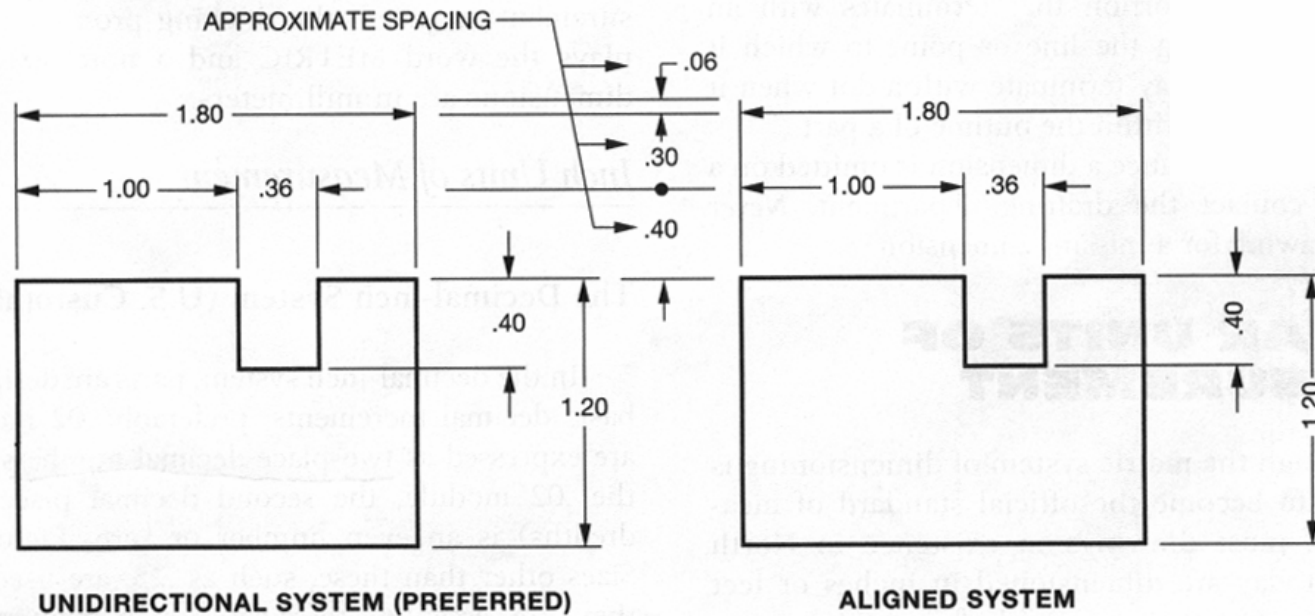
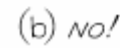
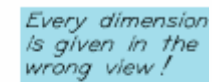
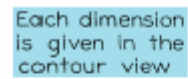
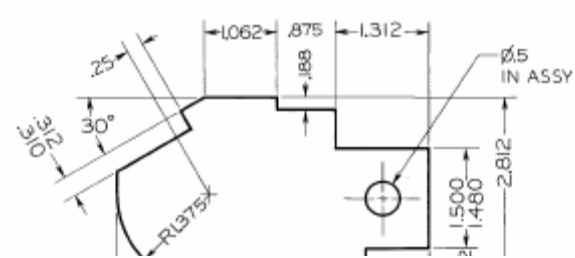
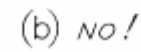
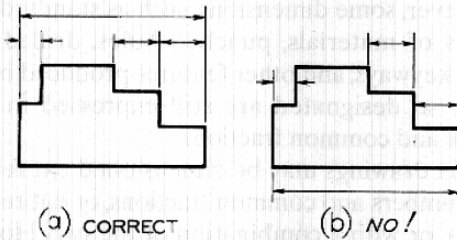
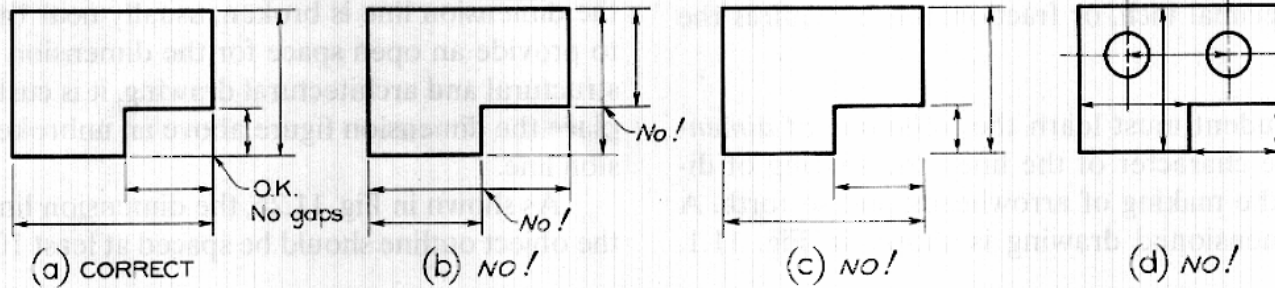


FIGURE 2-2 ■ Dimensioning systems

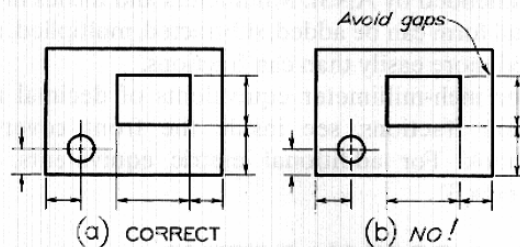


Extension Lines

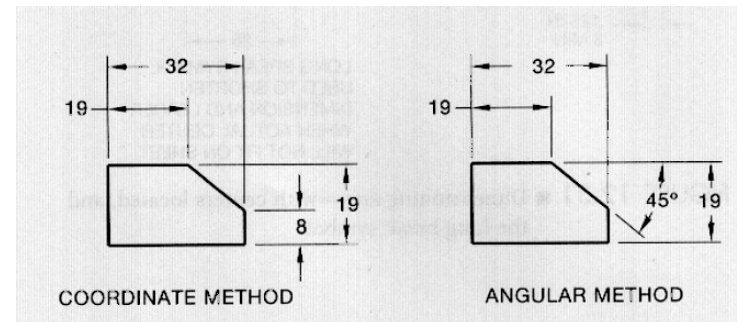
Dimension and Extension Lines.



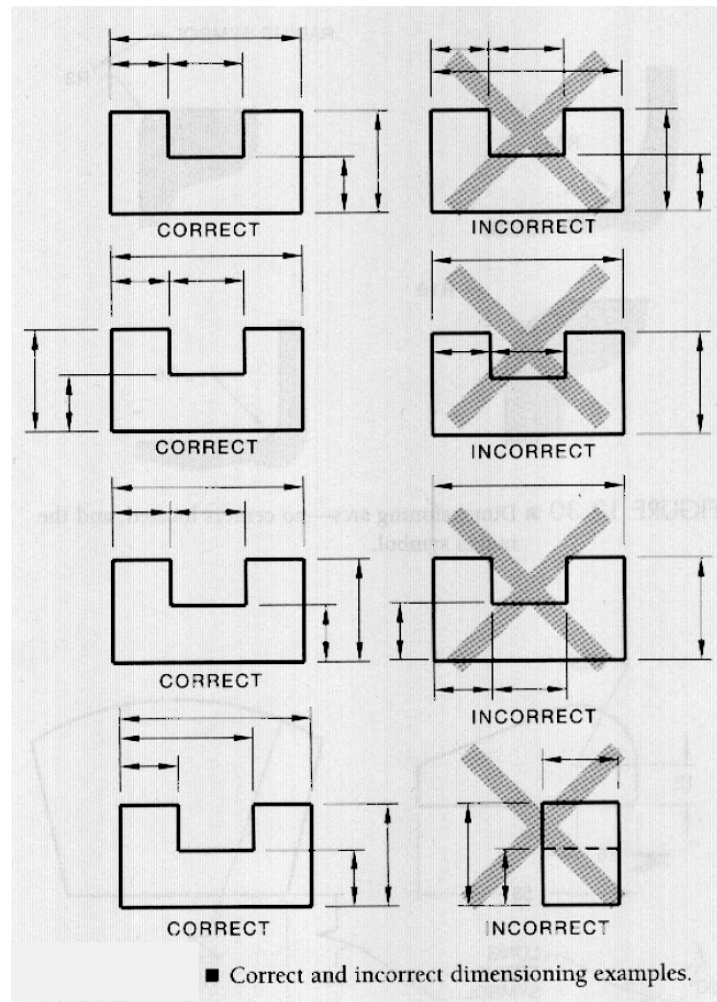
Grouped Dimensions.



Crossing Lines.



Extension Lines



Measurement

- **Decimal-inch (e.g., 15.03)**
 - 2 places most often
- **Fractional-inch (e.g., 1 ½)**
 - Not preferred
 - 64th's
- **Feet and inch (e.g., 2'-7")**
 - Architectural
- **SI – Metric**
 - Degrees of precision
 - 0.2 preferred (versus .20)
 - “Metric” should be noted on drawing

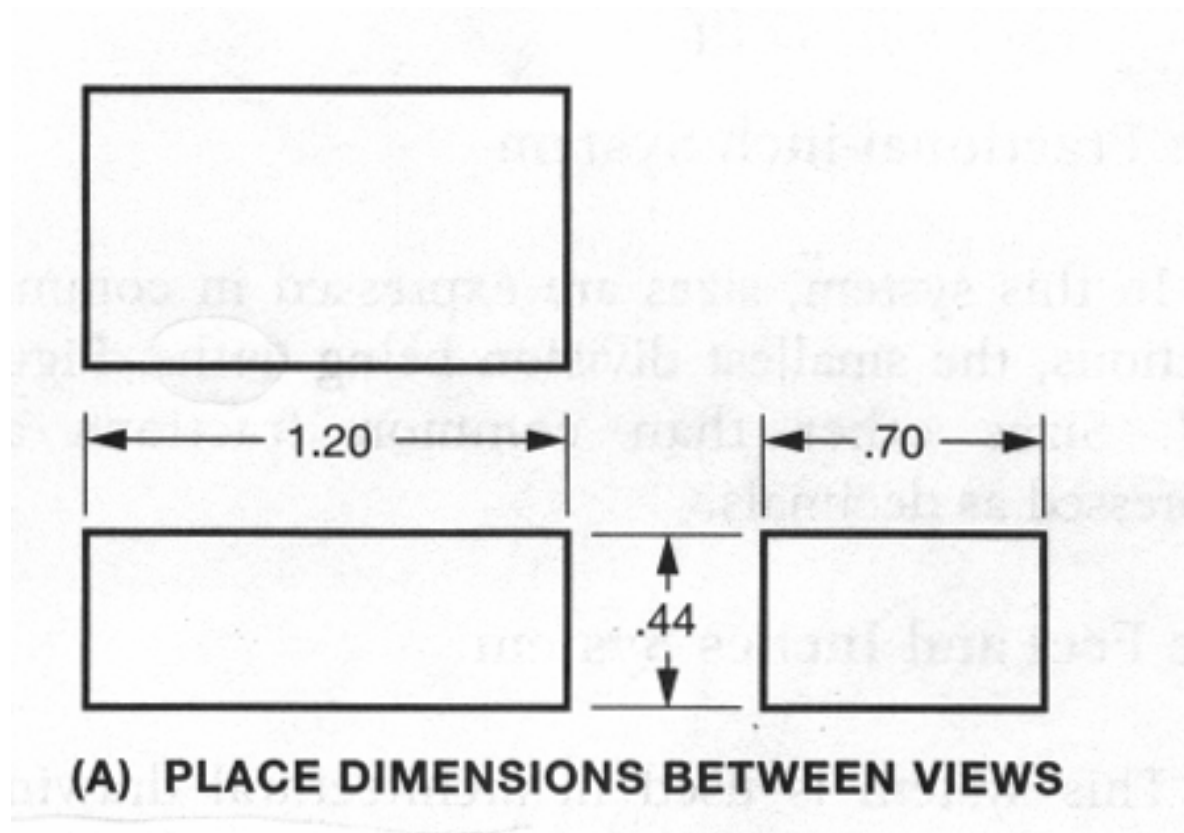
Rules for Dimensioning

- In applying rules, “clarity” prevails
- Dimension lines should be outside the part outline
- Dimension lines should not cross each other
- Don’t double dimension, no redundant dimensions
- Pick the view that most clearly describes the feature
- Place dimensions between views when possible

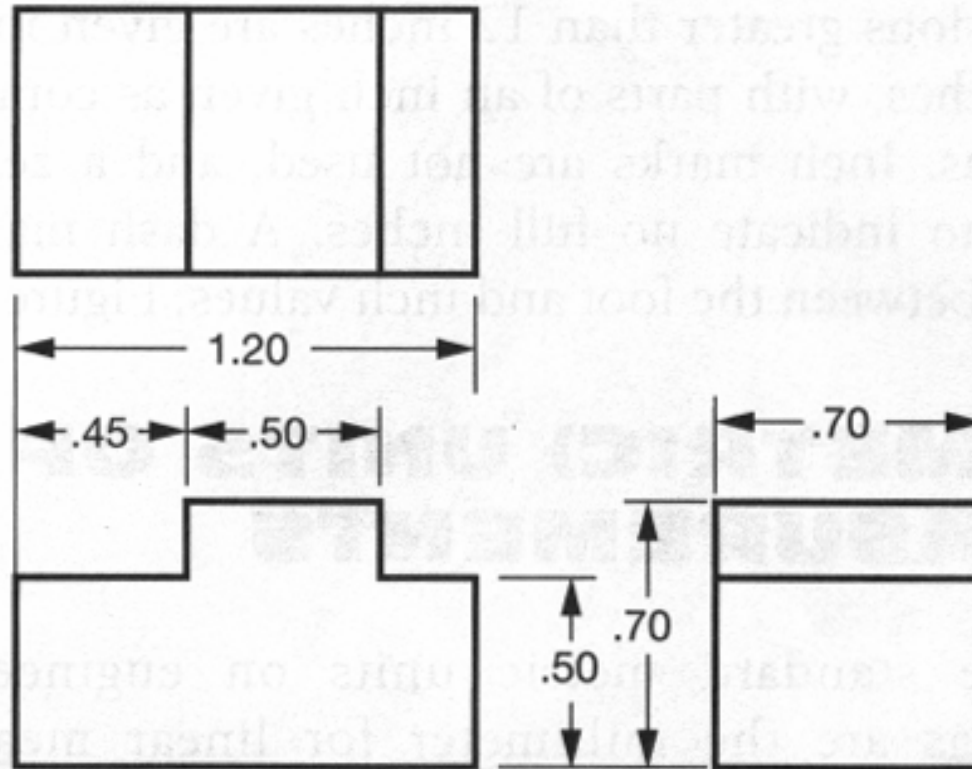
Rules for Dimensioning

- **Dimension to solid lines instead of hidden lines**
- **Place smallest dimension first, largest farthest from profile**
- **Use one dimension system (unidirectional)**
- **Leave a small gap between extension line and feature**
- **Extension lines do not cross unless unavoidable**

Example of Rules



Example of Rules



(B) PLACE SMALLEST DIMENSION NEAREST THE VIEW BEING DIMENSIONED

Assignment

- A4