

## Basic Dimensioning Skills

Objective 006.02\_ Explain the procedure for dimensioning mechanical drawings.

### Procedures for using decimal and metric measurements:

#### Decimal inches:

- Decimals are the \_\_\_\_\_ (American National Standards Institute) standard.
- Decimals are \_\_\_\_\_ to add, subtract, multiply and divide than \_\_\_\_\_.
- Preferably, decimals should be \_\_\_\_\_ to \_\_\_\_\_ decimal places (unless more precision is required).
- \_\_\_\_\_ zero \_\_\_\_\_ the decimal point for values of LESS THAN ONE.
- Display trailing zeros equal to the drawing's \_\_\_\_\_.

#### Fractional inches:

- Use where close tolerances are \_\_\_\_\_ important.
- The \_\_\_\_\_ fraction bar is preferred.
- \_\_\_\_\_ the inch mark when dimensions are ALL in \_\_\_\_\_.

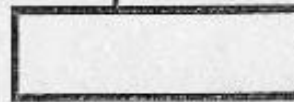
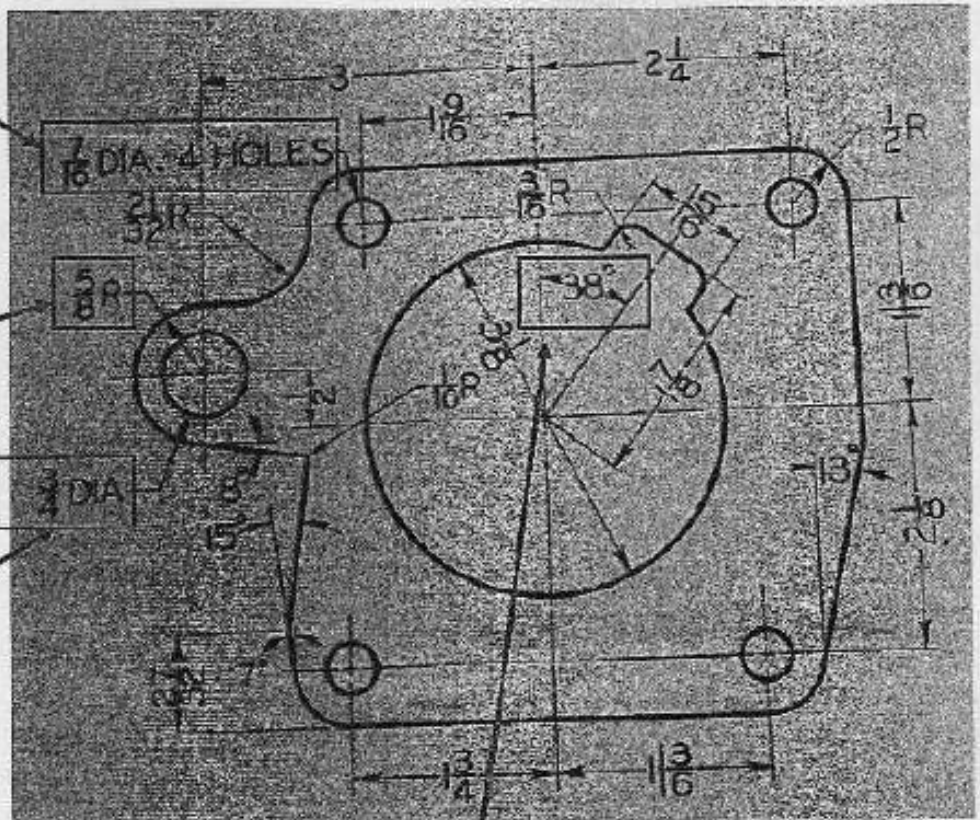
#### Metric:

- Use where \_\_\_\_\_ measurement are \_\_\_\_\_ than 10,000 millimeters.
- The \_\_\_\_\_ is the standard unit of measure.
- The abbreviation for millimeters \_\_\_\_\_ is usually \_\_\_\_\_ when ALL dimensions are in millimeters.
- The \_\_\_\_\_ is used as a decimal point in \_\_\_\_\_ speaking countries, other countries use a \_\_\_\_\_.
- If the value is \_\_\_\_\_ than ONE millimeter, a \_\_\_\_\_ should precede the decimal point.
- \_\_\_\_\_ trailing zeros...

## General rules of dimension placement:

- The number ONE RULE of dimensioning is that of \_\_\_\_\_.
- Place dimensions where the shape is \_\_\_\_\_ shown.
- \_\_\_\_\_ dimensions should be placed \_\_\_\_\_ to the object.
- \_\_\_\_\_ and \_\_\_\_\_ dimensions when possible.
- \_\_\_\_\_ duplicate and/or unnecessary dimensions.
- \_\_\_\_\_ place a dimension to \_\_\_\_\_ with a line of a drawing.
- Try to \_\_\_\_\_ placing dimensions \_\_\_\_\_ a view.
- \_\_\_\_\_ crowding dimensions.
- \_\_\_\_\_ dimensioning to \_\_\_\_\_ features.
- Place dimensions \_\_\_\_\_ the views to which they relate.
- LINES should be \_\_\_\_\_ and \_\_\_\_\_ noticeably with object lines.
- Dimensions should be included that describe both \_\_\_\_\_ and \_\_\_\_\_ of features.
- The diameter of CYLINDERS if dimensioned in the \_\_\_\_\_. The diameter of MACHINED HOLES is dimensioned in the \_\_\_\_\_.

Illustrate the correct placement of dimensions on the following circular features:



**Arcs:**

- Dimension by using the \_\_\_\_\_.
- The letter \_\_\_\_\_ should precede the arc size.

**Circles:**

- Dimension by using the \_\_\_\_\_.
- The \_\_\_\_\_ symbol should precede the circle size.
- Use an "X" when describing the number or \_\_\_\_\_ of circles.

**Angles:**

- Correct placement of dimensions on angular features where the angles are expressed in degrees.

**Point to point dimensions** (consisting of "chains" of dimensions placed end to end:

- One dimension is \_\_\_\_\_.
- \_\_\_\_\_ establishes the standard or "correct" rules regarding dimension placement when creating technical drawings.