

# Mechanical Drawing: Board & CAD Techniques

## Chapter 12 Pictorial Drawings

### Chapter Summaries

#### **Section 12.1 Types of Pictorial Drawing**

- An isometric drawing is a drawing in which the object is aligned with the three axes equally spaced at  $120^\circ$  angles. An oblique drawing is one in which two axes of the object are parallel to the projection plane. A perspective drawing is a three-dimensional representation of an object as it appears to the eye from a particular point.
- Axonometric projection has three types: diametric in which only two angles are equal; trimetric in which all three angles are different; and isometric in which the axes form three equal angles of  $120^\circ$  on the plane of projection.

#### **Section 12.2 Creating Pictorial Drawings**

- Oblique drawings are classified according to the length of an object's receding lines along the oblique axis: cavalier (full length), normal (three-fourths size), and cabinet (one-half size).
- One-point perspective is a view that has one vanishing point in comparison to a two-point perspective that has two vanishing points.
- At times, it is necessary to show a sectional (full or half) view of an isometric drawing. The process involves drawing the object's complete view and then erasing the part that has been cut away.
- AutoCAD provides predefined, standard views for 3D objects. The first step is to build the object in three dimensions and then change to an isometric, oblique, or perspective view as your need dictates.