

Last Name:	
First Name:	
Class:	
Grade:	Converted to Final Grade:

Beginning Engineering Graphics
Instructor: Edward N. Locke

Quiz 3: Types of Drawings, Coordinate System and Orthographic Projection

(1). The four principle categories of engineering drawings according to their target fields of usage are:

1. mechanical, electronic, architectural, and production;
2. three- views, pictorial, perspective and isometrics;
3. mechanical, electrical, architectural, and civil;
4. two-views, three-views, one-point perspective and two-point perspective.

(2). Sketch the Cartesian Coordinate System with X-axis and Y-axis with positive and negative values, and the origin; and circle the correct statement about “the Right-hand Rule”:

1. the thumb pointing towards right direction represents the X-axis, the index finger pointing upwards represents the Y-axis, and middle finger pointing at yourself represents the Z-axis;
2. the thumb pointing towards right direction represents the Y-axis, the index finger pointing upwards represents the X-axis, and middle finger pointing at yourself represents the Z-axis.

(3). Circle all correct statements about isometric drawings:

1. Isometric drawings are the most realistic and picture-like drawings;
2. Isometric drawings are one of the easiest to make among all pictorial drawings;
3. In isometric drawings, the three axes are 120° apart;
4. In isometric drawings, one side of the object appears closest. The top and one side slant away. Isometric drawings are based on one perpendicular set of lines and one receding line, at any angle but with 30° or 45° as the most common.

(4) Circle all correct statement about three-view drawings:

1. Three-view drawings are orthographic drawings;
2. Three-view drawings show the objects in a three-dimensional, realistic and pictorial way;
3. Sometimes auxiliary views showing the interior details of an object or sectional views showing the true shape of a slanted surface are needed to completely describe the object.
4. Sometimes auxiliary views showing the true shape of slanted surface or sectional views showing the inside details of an object are needed to completely describe the object.

(5) Circle all correct statements on isometric drawings:

1. Lines parallel in orthogonal view must be parallel in an isometric view.
2. All lines drawn in isometric drawings are parallel to the three axes and drawn in full scale.
3. In isometric drawings, lines that are parallel to the three axes are drawn in full scale; lines that are not parallel to the axes are not drawn in full scale.
4. Circles drawn in isometric sometimes appear in their true shape.