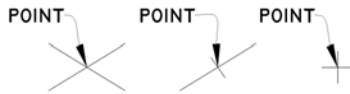
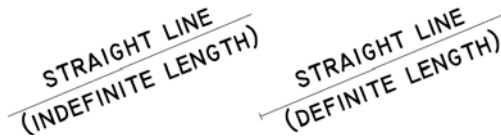


Some Key Terms

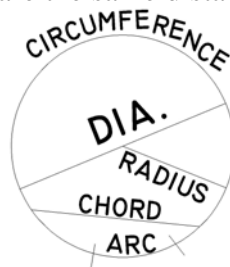
A **point**, represents a location in space or on a drawing that has no width, height, or depth. A point is represented by the intersection of two lines, a short crossbar on a line or a small cross. Never represent a point by a simple dot on the paper.



A **line**, can have an indefinite or definite length. A straight line is the shortest distance between two points and is commonly referred to simply as a "line".

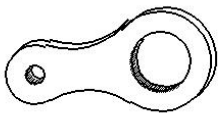


A **circle**, is a closed curve, all points of which are the same distance from a point called the center.

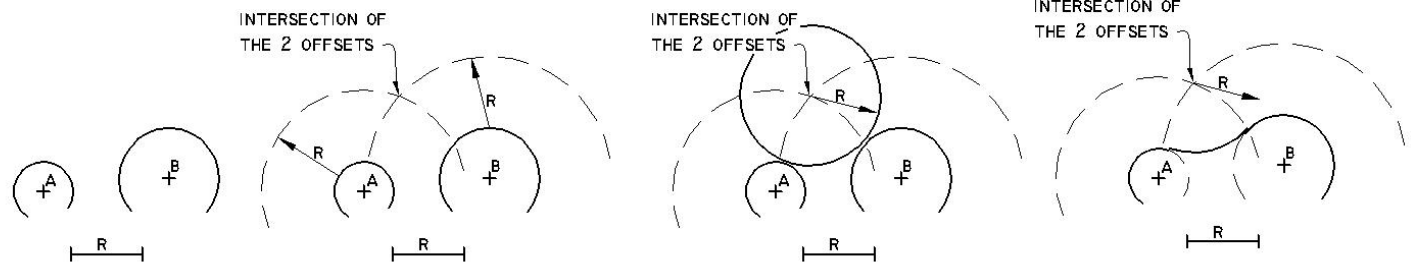


Introduction to Descriptive Geometry

Descriptive Geometry is a mathematical-graphical procedure to draw the exact representation of geometrical relations in drawings. You will learn more concepts later, but for this project you need to understand the "**Drawing an Arc Tangent to Two Arcs**" concept.



EXAMPLE



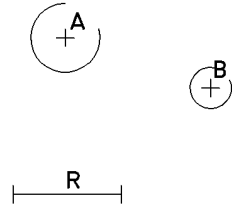
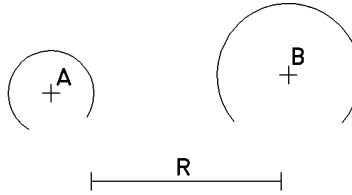
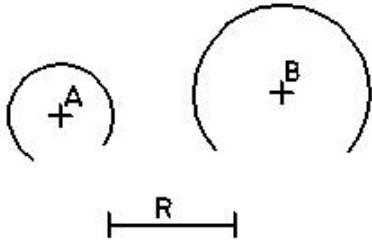
1. THERE ARE TWO ARCS (A & B), AND YOU WANT TO DRAW A 3RD ARC, AT THE RADIUS OF "R", TANGENT TO THE TWO ARCS.

2. OFFSET A DISTANCE "R" FROM ARC A, THEN B. NOTE WHERE THESE TWO OFFSETS INTERSECT.

3. DRAW A CIRCLE WITH THE RADIUS "R" FROM THE INTERSECTION POINT.

4. TRIM THE CIRCLE AT THE POINTS THEY WERE TANGENT TO CIRCLES A & B.

Practice drawing an arc tangent to the two arcs by hand with a compass in the three examples below.



Review Questions

1. What are the four basic elements used to create the most complex drawings?

2. What is a point on a drawing?

3. Why do you think you never represent a point by a simple dot on the paper?

4. A line can have a _____ and _____ length.

5. In the box below, graphically show how an Arc is part of a Circle.

Additional Problems
11th edition **Technical Drawing** By: Giesecke

Fig 4.57, pg 131 Fig 4.77, pg 131