**The Circle**

*Definition:* A closed plane curve having every point an equal distance from a fixed point within the curve.

- **Circumference:** The distance around a circle.
- **Diameter:** The distance across a circle through the center.
- **Radius:** The distance from the center to the edge of a circle.
- **ARC:** A part of the circumference.
- **Chord:** A straight line connecting the ends of an arc.
- **Segment:** An area bounded by an arc and a chord.
- **Sector:** A part of a circle enclosed by two radii and the arc that they cut off.

**Formulas:**

- Circumference of a Circle = \(3.1416 \times 2 \times \text{radius}\)
- Area of a Circle = \(3.1416 \times \text{radius}^2\)
- ARC Length = Degrees in arc \(\times\) radius \(\times\) 0.01745
- Radius Length = One-half length of diameter
- Sector Area = One-half length of arc \(\times\) radius
- Chord Length = \(2\sqrt{AB}\)
- Segment Area = Sector area minus triangle area

**Note:**

- \(3.1416 \times 2 \times R = 360^\circ\),
- or \(0.0087266 \times 2 \times R = 1^\circ\), or \(0.01745 \times R = 1^\circ\)

This gives us the arc formula.

**Example:**

For a 90° conduit bend, having a radius of 17.25'':

- \(90 \times 17.25'' \times 0.01745 = \text{Developed Length}\)
- \(27.09'' = \text{Developed Length}\)