**METRIC EQUATION**

1. \[ E = \frac{AL}{800} \]
2. \[ y = \frac{4D^2E}{L^2} \]
   \[ y = \frac{D^2A}{200L} \]

Where:

- \( G_1, G_2 \) = Tangent grades, in percent
- \( E \) = Ordinate from P.I. to curve, in meters
- \( A = G_1 - G_2 \), The algebraic difference in grade
- \( L \) = Length of curve, in meters
- \( y \) = Ordinate from tangent to curve, in meters
- \( D \) = Distance from nearest P.C. or P.T. to any point on curve, in meters

**VERTICAL CURVE (METRIC)**