Vertical Curves
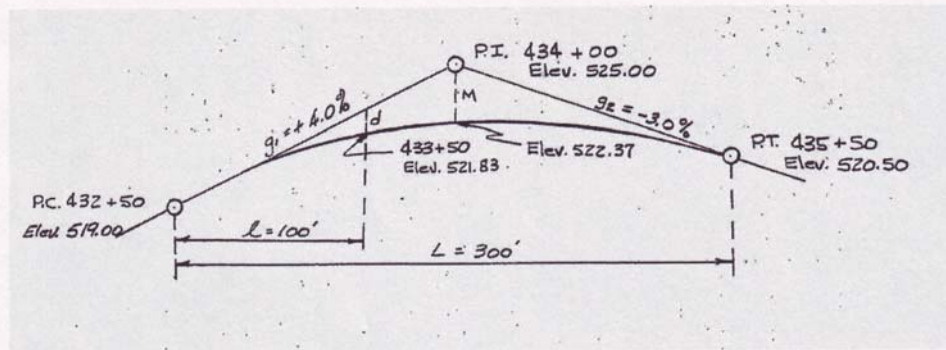

a = algebraic difference of tangent grades = $g_1 - g_2$

$$= 4.00 - (-3.00) = 7.00$$

$$M = aL/800 = 7 \times 300/800 = 2.625'$$

$$d = 4M(1/L)^2 = 4 \times 2.625 \times (100/300)^2 = 1.17'$$

The tangent elevation at Station 433+50 = $519.00 + 4.00 = 523.00$

Curve elevation at Station 433+50 = $523.00 + 1.17 = 521.83$