Price = Face value \left(1 - \frac{\text{Days}}{360} \times R_{BD}\right)

R_{BD} = \frac{\text{Par-Price}}{\text{Par}} \times \frac{360}{n}

R_{BEY} = \frac{\text{Par-Price}}{\text{Price}} \times \frac{365}{n}

R_{BEY} = \frac{365 \times R_{BD}}{360 - (R_{BD} \times n)}

\text{Equivalent taxable yield} = \frac{\text{Tax-exempt yield}}{1 - \text{Marginal tax rate}}

\text{Critical tax rate} = 1 - \frac{R_{M}}{R}

30/360

\text{If } D1 = 31, \text{ change to 30}
\text{If } D2 = 31 \text{ and } D1 = 30 \text{ or 31, change } D2 \text{ to 30, otherwise leave } D2 \text{ at 31}
\text{# of days}

(Y2 − Y1) \times 360 + (M2 − M1) \times 30 + (D2 − D1)

30E/360 – Assumes a 30-day month
\text{If } D1 = 31, \text{ change to 30}
\text{If } D2 = 31 \text{ Change to 30}
\text{# of days}

(Y2 − Y1) \times 360 + (M2 − M1) \times 30 + (D2 − D1)

w = \frac{\text{# of days between settlement and next coupon payments}}{\text{# of days in coupon period}}

\text{Accrued interest} = C \left(\frac{\text{# of days since last coupon}}{\text{# of days in period}}\right)

\frac{\partial P}{P} = -D \left(\frac{\partial R}{1 + R}\right)

\frac{\partial P}{P} = -D \left(\frac{\partial R}{1 + (R/2)}\right)

D = \sum \frac{\text{DCF} \times t}{\text{DCF (price)}}

D = \frac{1 + y}{y} \cdot \frac{(1 + y) + T(c - y)}{c[(1 + y)^T - 1] + y}

\text{Duration of a perpetuity is:} \quad \frac{1 + y}{y}

\text{Duration for a level annuity is:} \quad \frac{1 + y}{y} - \frac{T}{(1 + y)^T - 1}

\partial P = P \times\left(\frac{-\partial R}{1 + R}\right)
\[
\frac{\partial P}{P} = -D \left[ \frac{\Delta R}{1 + R} \right] + \frac{1}{2} CX(\Delta R)^2
\]

CX = convexity = Scaling factor [capital loss from one basis point rise in R + capital gain from one basis point drop in R]

\[
D_M = \frac{D}{1 + y}
\]

%Δ in bond price = –DM(ΔR)

\[
D_E = \frac{V_- - V_+}{2V_0(\Delta R)}
\]

V₀ = initial price
V₋ = price if YTM decreases by R
V₊ = price if YTM increases by R

\[
CX_E = \frac{V_- + V_+ - 2V_0}{2V_0(\Delta R)^2}
\]