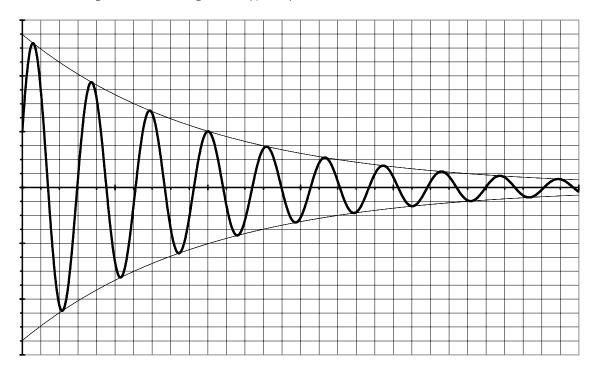
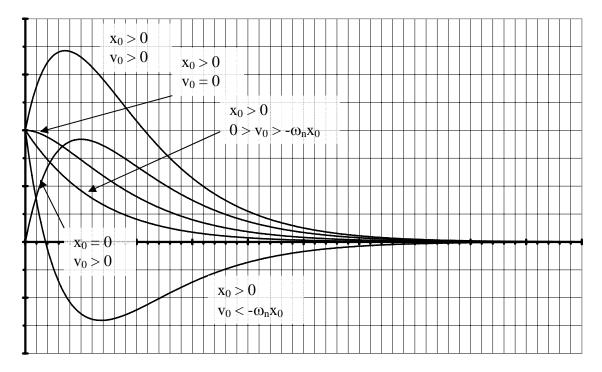
Free Response of Single Degree of Freedom Systems

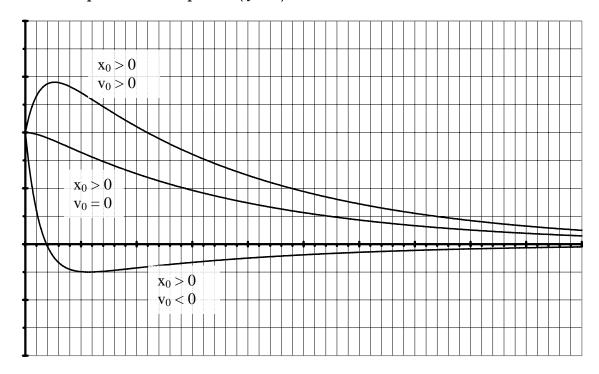
Underdamped Free Response (ζ < 1)



Critically Damped Free Response ($\zeta = 1$)



Overdamped Free Response ($\zeta > 1$)



Same ω_n Different Damping, Same Initial Conditions

