8.9 Using Eqs. 10 and 13, express the effect of damping on the frequency of a series *RLC* circuit. Let $\omega_0 = 1/\sqrt{LC}$ be the frequency of the undamped circuit. Suppose enough resistance is added to bring Q

from ∞ down to 1000. By what percentage is the frequency ω thereby shifted from ω_0 ?