Name: _____

1. Define diffraction. (10 pts)

2. Define interference. (10 pts)

3. What does the symbol D in Eq. 21.1 represent? (10 pts)

4. What does the symbol d in Eq. 21.3 represent? (10 pts)

5. Use substitution to solve the single-slit equations (Eq. 21.1 and Eq. 21.2) for λ, in terms of the quantities that we will determine in lab: W, L, D. (20 pts)

6. Use substitution to solve the double-slit equations (Eq. 21.5 and Eq. 21.3) for λ, in terms of the quantities that we will determine in lab: m, L, d, y. (20 pts)

7. Given $D_1 = .02$ mm and $\delta D = .005$ mm, calculate $\delta_\% D_1$. Given $D_2 = .16$ mm, calculate $\delta_\% D_2$. Why will it be important to begin with the widest slit? (20 pts)