1. Define diffraction. (1 pt)

2. Define interference. (1 pt)

3. Calculate the wavelength of light, \( \lambda \), in Fig. 29-2 by assuming the diagram is to scale. The steps are as follows (put calculator in radian mode): (4 pts)
   - Determine \( \phi \) by measuring \( W \) and \( D \) from the diagram (note that \( 2 \tan \phi = W/D \))
   - Determine the wavelength by using \( \phi = \frac{\lambda}{d} \) (d is slit width, \( \phi \) is in radians).
   - Show all work and include all measured dimensions.

4. Calculate \( \lambda \) in Fig. 29-3 by assuming the diagram is to scale. Use \( \lambda = \frac{dy}{mD} \) (assume \( m=1 \)). Note that d is slit spacing here. Show all work and measured dimensions. (4 pts)