**Noteguide for Single Slit Interference Patterns (Videos 12F2) Name**



Write down what all the variables are:

**Example: If 644 nm light falls on a slit 0.0560 mm wide,**

A. What is the full angular width of the central diffraction peak?

B. What is its width on a screen that is 4.50 m away?

C. What distance separates the central maximum from the third minimum on the screen 4.50 m away?

**Whiteboard 1: Monochromatic light falls on a slit that is 0.00320 mm wide. The angle between the central maximum and the second dark fringe on one side is 18.0o. What is the wavelength of light used? (**4.94x10-7 m (494 nm) **)**

**Whiteboard 2: When blue light of wavelength 462 nm falls on a single slit, the first dark bands on either side are separated by 43.0o. Determine the width of the slit. (**1.26x10-6 m (1.26 μm) **)**