

Physics 391  
Lesson 29 Preflight

Read 11.3.1 – 11.3.3

1. What is a point-spread function?
2. Describe in words the process of convolution. Your description should take a few sentences and give enough steps to allow someone to perform the operation and should NOT use Fourier transforms.
3. Now, how can we use Fourier transforms to calculate the convolution?
4. How are Fourier transforms, convolution, and the array theorem used to calculate diffraction patterns of apertures?
5. How do Fourier methods help you perform apodization?