Part 1

1. Write a function of the form ⟨*NetID*⟩`_histogram_equalize()` that takes as input a single image (dtype `uint8`) and outputs a tuple with two items:
   (a) the histogram-equalized `uint8` image
   (b) the intensity transformation function, i.e. a function `f` such that `I_out = f(I_in)` for [an arbitrarily-shaped numpy array of] original pixel intensities `I_in` and histogram-equalized intensities `I_out`
2. Run the provided test script. It should produce a figure showing the original and histogram-equalized images, the corresponding histograms, and the intensity transformation function.

You may want to use Numpy's `histogram()`, `sum()`, or `cumsum()`. You should use no libraries other than Numpy.

Your method should be in a module also named ⟨*NetID*⟩`_histogram_equalize.py`.