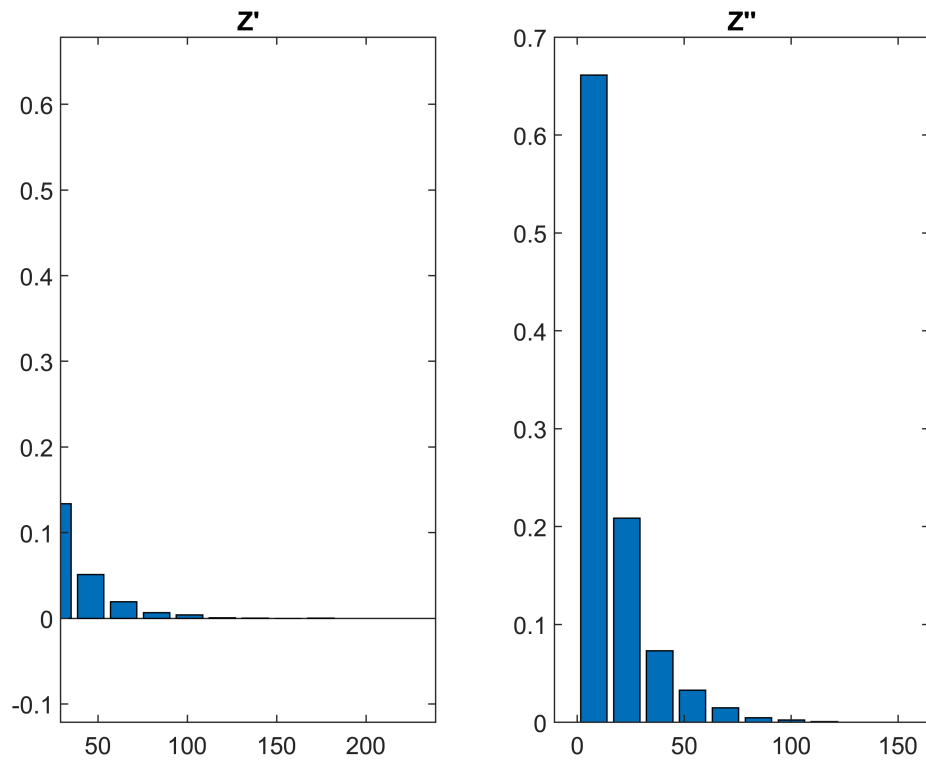


```

%% Homework 4
n=0.25; %threshold
b1=imread('blockArtifacts1.tif');
b2=imread('blockArtifacts2.tif');
b3=imread('blockArtifacts3.tif');
k1=tampcheck(b1) %0.2461 not tampered with

```

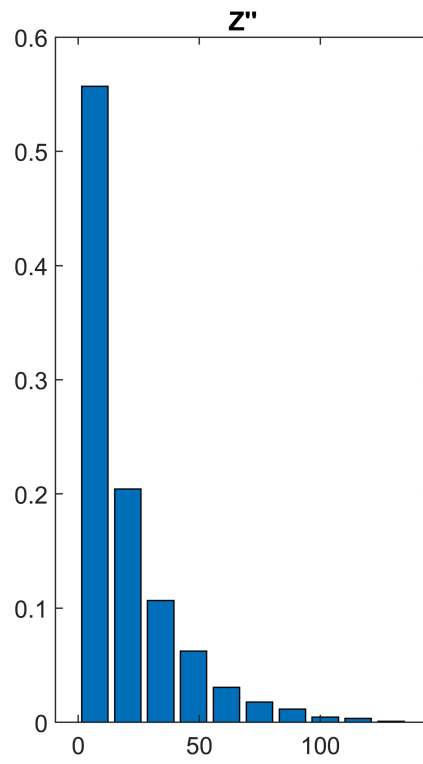
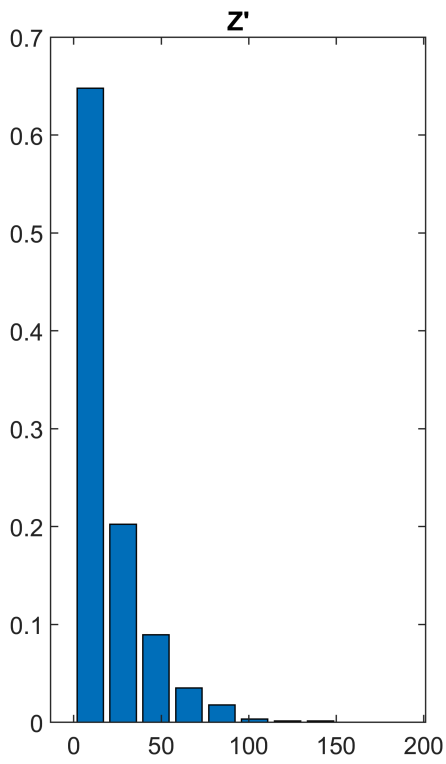


k1 = 0.2461

```

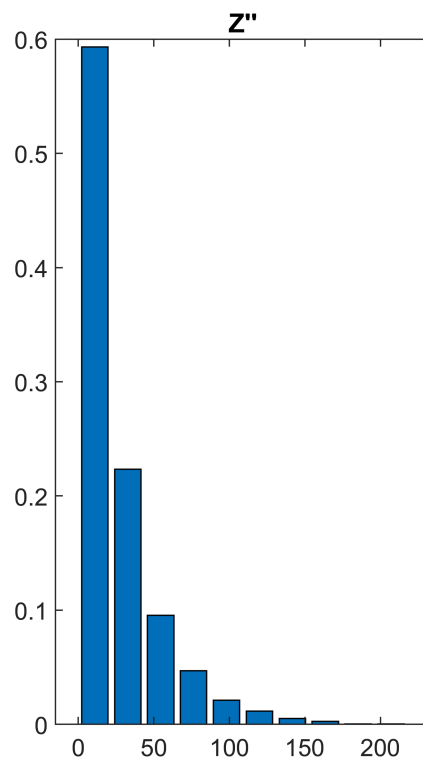
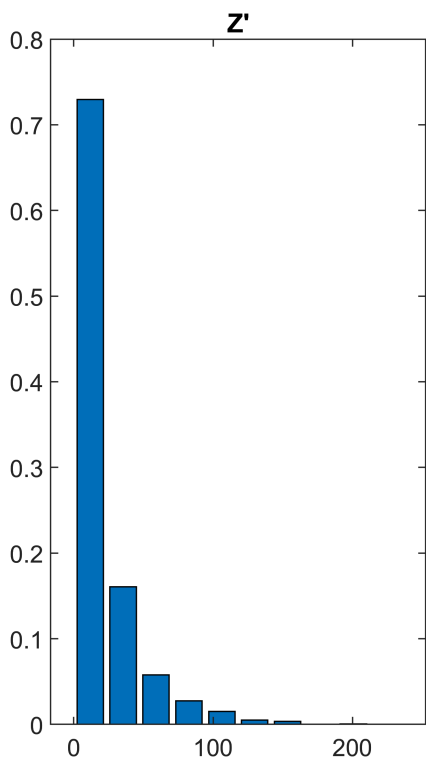
k2=tampcheck(b2) %0.1816 not tampered with

```



$k_2 = 0.1816$

$k_3 = \text{tampcheck}(b_3)$ %0.2734 is greater than the threshold and is therefore tampered with.



$$k_3 = 0.2734$$

Questions

Briefly explain why the histograms of K' and K'' values should be different if an image has been JPEG compressed.

If an image has been jpeg compressed, then it has been segmented into 8×8 pieces, where each segment has its own calculations done so that it can be compressed. This results in greater differences between the segments, which is why you'll see larger differences between k' (since it is the bit values in 1 block), and k'' (which is the bit values in 4 different blocks).