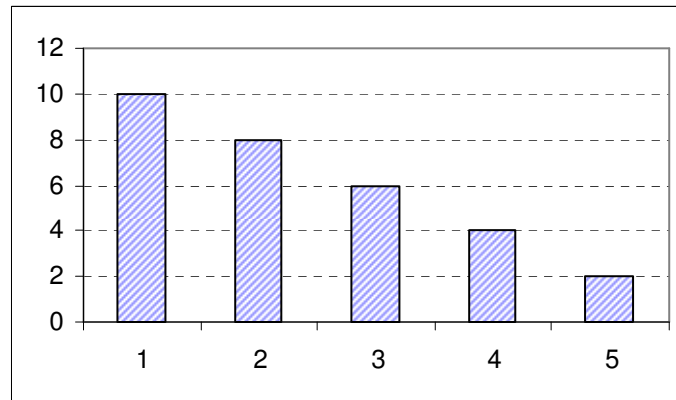


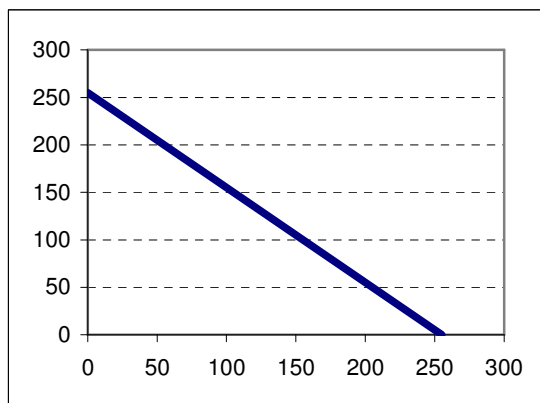
QUIZ # 2
Digital Image Processing
BESE 14

(2.5x3)

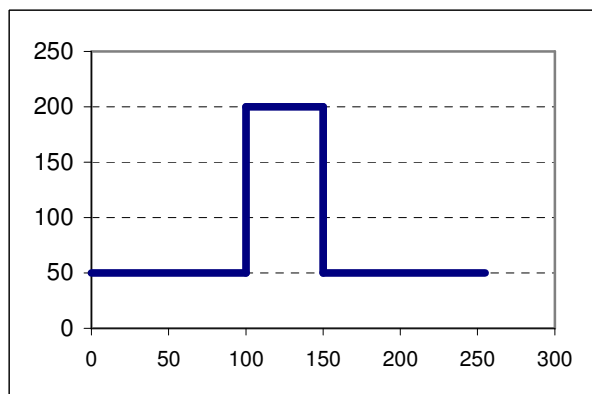
1. Consider an 8-bit image having the following histogram:



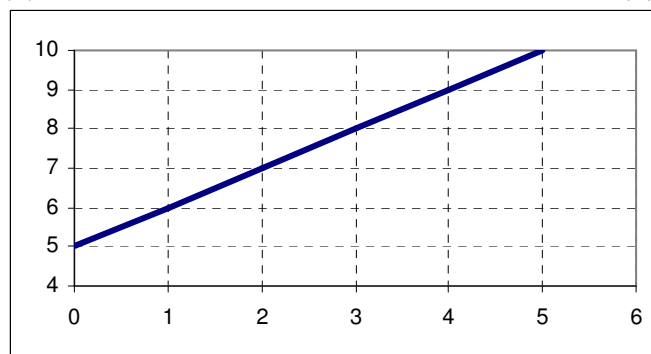
Show the histogram of the output image if the following transformations are applied to this image.



(a)



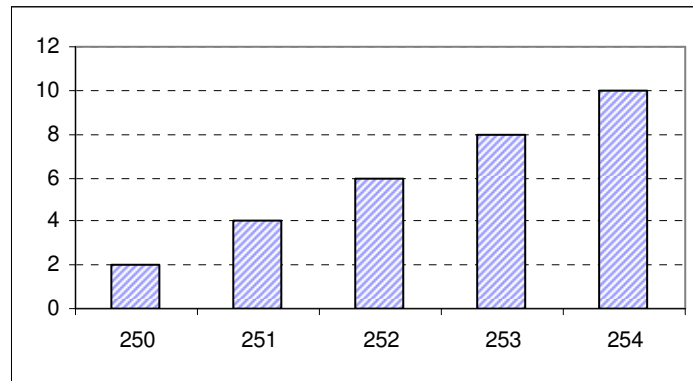
(b)



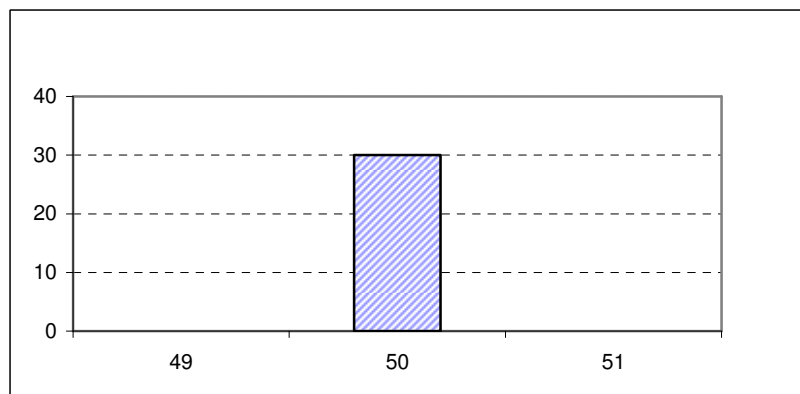
(c)

Solution:

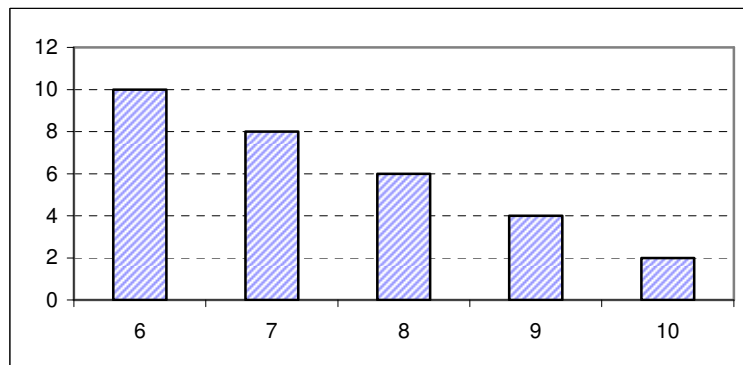
a. This is the negative transformation and will result in the following histogram:



b. All values in the image are set to a value of 50 and will have the following histogram



c. A value of 5 is added to each pixel resulting in the following histogram:



(1.5)

2. Show a transformation curve that will compress the values of dark pixels and expand the values of brighter pixels.

Solution:

Any curve of the form

$$s = c \times r^\gamma$$

With values of gamma greater than 1 could be used for such transformations

(1)

3. What is a point operation?

Solution

In Point operations, the output value at specific coordinates (x,y) is dependent only on the input value at (x,y).

+++++