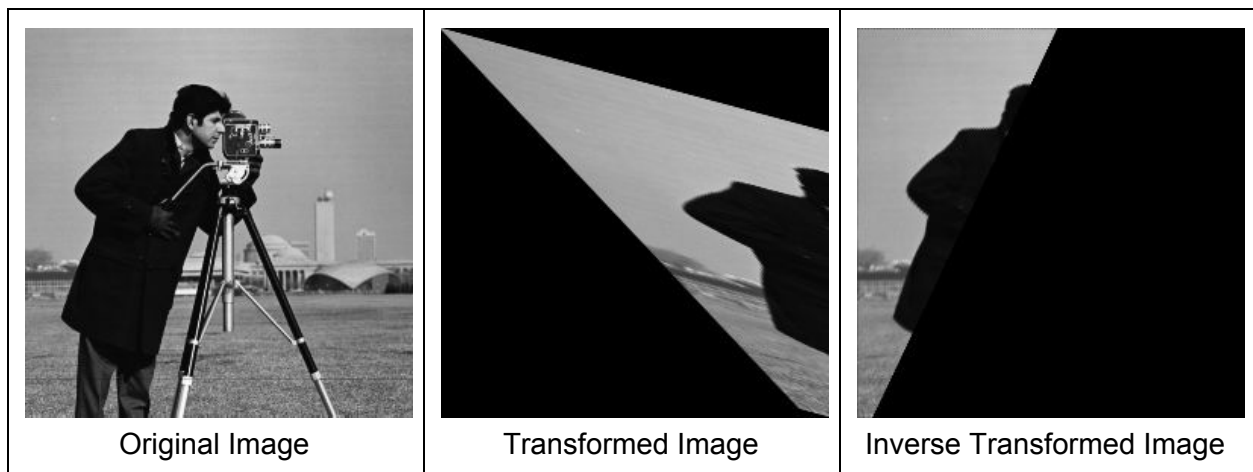Q1b.

```
L 4
CDF: [0.4, 0.6000000000000001, 0.6000000000000001, 1.0]
R    S    P(s)
0 -> 1 -> 0.4
1 -> 2 -> 0.2
2 -> 2 -> 0.2
3 -> 3 -> 0.4
```

Firstly i calculated L, which is $2^{BitDepth}$
Calculate CDF from given PDF.
Using transformation function (L-1)xCDF(r_i), I calculated new pixel intensity.

Q4.

| Original Image | Transformed Image | Inverse Transformed Image |

Some portion of the image is not captured if we use same input-output size of the image.
I observed that on increasing the size of the output matrix, more pixels are present in
Transformed image.