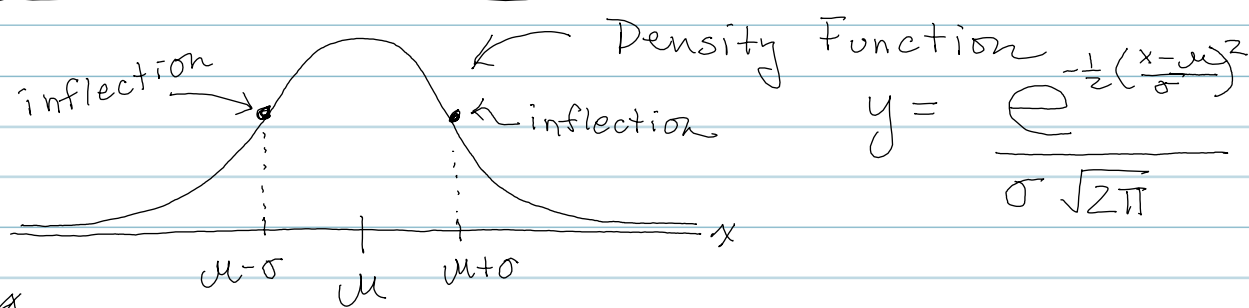


Normal Distributions (Gaussian Distribution)



The density function has a different μ & σ for every normal population.

All normal populations are different, but they all become the same when we compute z-scores.

x	$P(x)$
0	$\frac{1}{16}$
1	$\frac{1}{4}$
2	$\frac{3}{8}$
3	$\frac{1}{4}$
4	$\frac{1}{16}$

$$z = \frac{x - \mu}{\sigma}$$

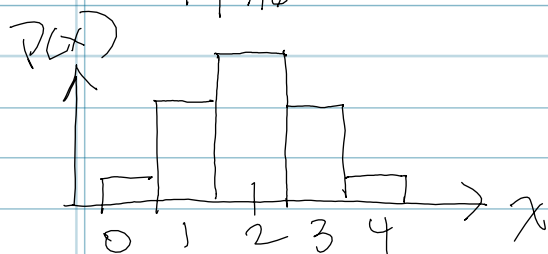
$$\mu = 2$$

$$\sigma = 1$$

z	$P(z)$
-2	$\frac{1}{16}$
-1	$\frac{1}{4}$
0	$\frac{3}{8}$
1	$\frac{1}{4}$
2	$\frac{1}{16}$

$$\mu_z = 0$$

$$\sigma_z = 1$$



Big Idea!! $\rightarrow$ Any normal population stays normal after computing z-scores, but the mean of z-scores is 0 & the std. dev. of z-scores is 1.