

Histogram

$X = \{23, 27, 30, 32, 31, 28, 39, 42, 47, 62, 53, 54, 70, 75\}$

$$21-30 = 4$$

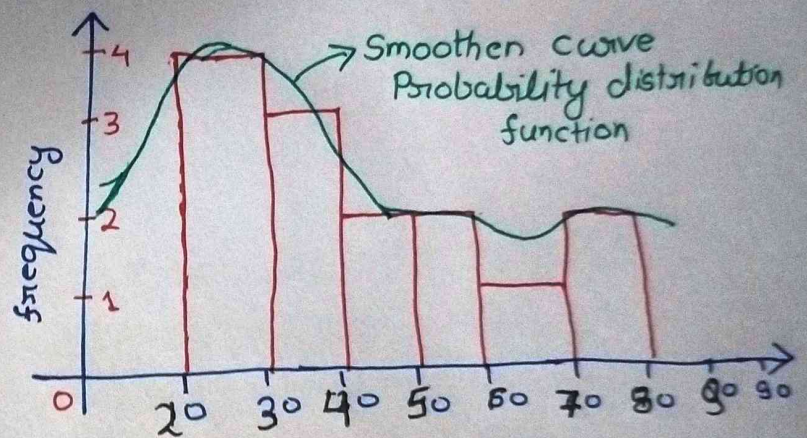
$$31-40 = 3$$

$$41-50 = 2$$

$$51-60 = 2$$

$$61-70 = 1$$

$$71-80 = 2$$



Probability distribution function

We smoothen the curve using kernel density function estimation

There can be overlapping elements in bin but we are only concern with frequency (Total) of elements in bin

$S_0 = \{20, 20, 19, 18, 19, 19, 10, 11, 7, 15\}$

$$\text{bin}(11-20) = 6$$