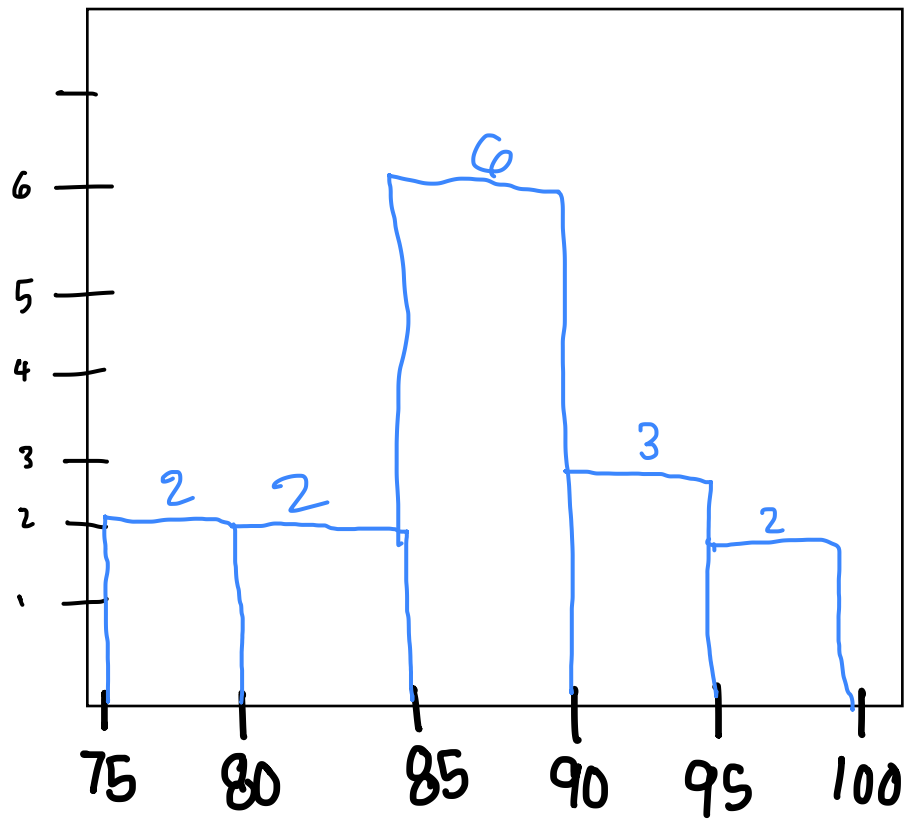


a)

$[75, 80)$	
$[80, 85)$	
$[85, 90)$	
$[90, 95)$	
$[95, 100)$	



b)

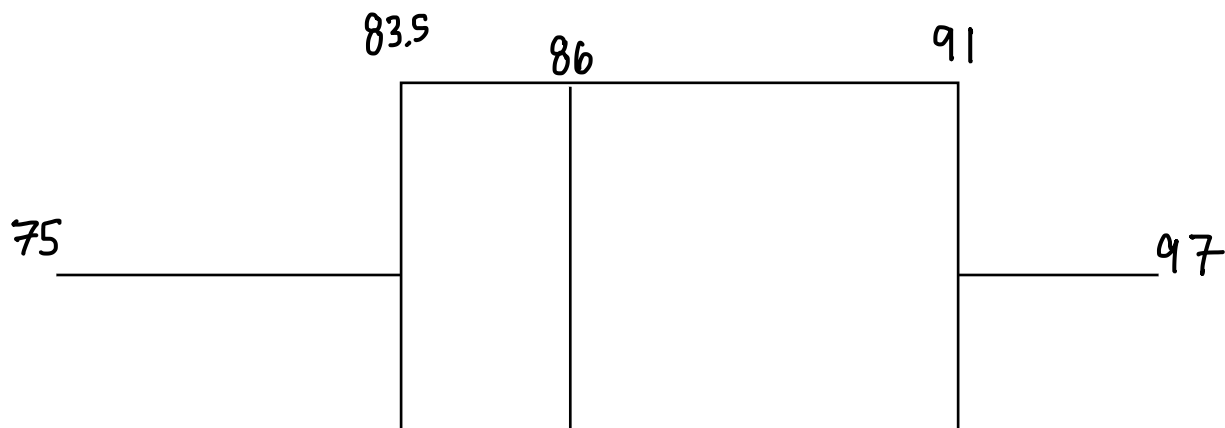
$$\left(\sum_{i=1}^n x_i \right) \frac{1}{n} = \frac{1}{15} (87 + 91 + \dots + 95)$$

$$\rightarrow \bar{x} \approx 86.5$$

$$\begin{aligned} \frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1} &= \frac{1}{n-1} \left[(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_{15} - \bar{x})^2 \right] \\ &= \frac{1}{15-1} \left[(87-86.5)^2 + (91-86.5)^2 + \dots + (95-86.5)^2 \right] \\ &= \frac{1}{14} \left[(.5)^2 + (4.5)^2 + \dots + (8.5)^2 \right] \end{aligned}$$

$$\rightarrow s^2 \approx 38.55$$

c



d

All statistics change and become smaller.
Can multiply 0.45 to all values except
variance to adjust for new units.
For variance we multiply by 0.45^2 .

e) All statistics change and become larger by 2
except for variance. Variance does not
change.