



1. heights of 10 students are (in cm)  
145, 147, 150, 152, 154, 160, 165, 168, 170, 180

$$\begin{aligned} \text{Range} &= 180 - 145 \\ &= 35 \text{ cm} \end{aligned}$$

2.

Marks obtained	tally Marks	frequency
1		1
2		2
3		1
4		3
5		5
6		4
7		2
8		1
9		1
total		20

- (i) highest number 9  
(ii) lowest number 1  
(iii) range =  $9 - 1$   
 $= 8$

$$\text{Arithmetic mean} = \frac{\text{Sum of all obs.}}{\text{no. of observations}}$$

$$\begin{aligned} &= 1 + 2 + 2 + 3 + 4 + 4 + 4 + 5 + 5 + 5 + 5 + 5 + 6 + 6 + 6 + 6 + 7 + 7 + 8 + 9 \\ &= \frac{100}{20} = 5 \end{aligned}$$