Aim:-To know about use of Mean, Median, Mode.

Objectives: :- 1.To know average height of students in my class.
2)To find which height group consists more number of students in my class.
3)To find relation between Mean, Median, Mode.

Materials used: White paper sheet, Scale /Rubber, Paint box, Black ball point pen or pencil.

Tools: Survey Method

Procedure: In my class number of students are 51. Record the data about their height in centimeter The data collected about the heights of students of a class are arranged in grouped form.the heights of the students are as below

Height in cm	135-140	140-145	145-150	150-155	155-160	160-165	Toal
Number of girls	4	7	18	11	6	5	51

Let us find mean by step deviation method:-

Height in cm	Number of girls	Class mark x_i	$\mu_i = x_i - a/h$ a= 147.5,h=5	$f_i X \mu_i$	
135-140	4	137.5	-2	-8	
140-145	7	142.5	-1	-14	
145-150	18	147.5	0	0	
150-155	11	152.5	1	-11	
155-160	6	157.5	2	-12	
160-165	5	162.5	3	-15	

$$Mean = A + \frac{\sum f_i \mu_i}{\sum f_i} \times h$$

$$= 147.5 + 5 \times 23/51 = 147.5 + 115/5$$

$$= (147.5 + 2.255)\text{cm} = 149.755\text{cm}$$

Now average height of my class students=149.8cm nearly

Let us find ***median*** of the data:-

Height in cm	Number of girls
135-140	4
140-145	7
145-150	18- median class
150-155	11
155-160	6
160-165	5

we have median class (145-150)

Let us find mode of the data:-

Height in cm	Number of girls
135-140	4
140-145	7
145-150modalclass	18
150-155	11
155-160	6
160-165	5

145-150modalclassso more students are in between 145cm -150cm Height

Suppose in case of RAWdata the collection 3,4,5,7.8,8
Mean=3+4+5+7+8+8/7 =35 /7=5
Median=5+7/2-12/2=6
Mode= 8
Observation:- we observeded that
3x median =mode + 2 x mean(Approx)
Mean=5, median=6and mode=8
3x median=3x6=18
Mode + 2 mean=8+2x5
=8+10=18

Result:- We found empirical relationship for statistical data
= 3 x median=Mode+2 x mean.

Experience of the student : By using this activity i understood what we have to calculate for averge and the use of mode,median

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Reference books / Resources:, IX,X Maths State Text books and IX,X class CBSE text book.