Praadis Education
The Complete Learning App

MCQ WORKSHEET-I
CLASS X: CHAPTER - 14
STATISTICS

1. For a frequency distribution, mean, median and mode are connected by the relation
(a) mode = 3mean – 2median (b) mode = 2median – 3mean
(c) mode = 3median – 2mean (d) mode = 3median + 2mean

2. Which measure of central tendency is given by the x – coordinate of the point of intersection of the more than ogive and less than ogive?
(a) mode (b) median (c) mean (d) all the above three measures

3. The class mark of a class interval is
(a) upper limit +lower limit (b) upper limit – lower limit
(c) $\frac{1}{2}$(upper limit + lower limit) (d) $\frac{1}{2}$(upper limit – lower limit)

4. Construction of cumulative frequency table is useful in determining the
(a) mode (b) median (c) mean (d) all the above three measures

5. For the following distribution

Marks	Number of students
Below 10	3
Below 20	12
Below 30	27
Below 40	57
Below 50	75
Below 60	80

the modal class is
(a) 10 – 20 (b) 20 – 30 (c) 30 – 40 (d) 40 – 50

6. For the following distribution

Marks	Number of students
Below 10	3
Below 20	12
Below 30	27
Below 40	57
Below 50	75
Below 60	80

the median class is
(a) 10 – 20 (b) 20 – 30 (c) 30 – 40 (d) 40 – 50

7. In a continuous frequency distribution, the median of the data is 24. If each item is increased by 2, then the new median will be
(a) 24 (b) 26 (c) 12 (d) 48

8. In a grouped frequency distribution, the mid values of the classes are used to measure which of the following central tendency?
(a) mode (b) median (c) mean (d) all the above three measures

9. Which of the following is not a measure of central tendency of a statistical data?
(a) mode (b) median (c) mean (d) range

10. Weights of 40 eggs were recorded as given below:

Weights(in gms)	85 – 89	90 – 94	95 – 99	100 – 104	105- 109
No. of eggs	10	12	12	4	2

The lower limit of the median class is
(a) 90 (b) 95 (c) 94.5 (d) 89.5

MCQ WORKSHEET-II
CLASS X: CHAPTER - 14
STATISTICS

1. The median class of the following distribution is

C.I	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
F	8	10	12	22	30	18

(a) 10 – 20 (b) 20 – 30 (c) 30 – 40 (d) 40 – 50

2. Weights of 40 eggs were recorded as given below:

Weights(in gms)	85 – 89	90 – 94	95 – 99	100 – 104	105- 109
No. of eggs	10	12	15	4	2

The lower limit of the modal class is

(a) 90 (b) 95 (c) 94.5 (d) 89.5

3. The arithmetic mean of 12 observations is 7.5. If the arithmetic mean of 7 of these observations is 6.5, the mean of the remaining observations is

(a) 5.5 (b) 8.5 (c) 8.9 (d) 9.2

4. In a continuous frequency distribution, the mean of the data is 25. If each item is increased by 5, then the new median will be

(a) 25 (b) 30 (c) 20 (d) none of these

5. In a continuous frequency distribution with usual notations, if $l = 32.5$, $f_1 = 15$, $f_0 = 12$, $f_2 = 8$ and $h = 8$, then the mode of the data is

(a) 32.5 (b) 33.5 (c) 33.9 (d) 34.9

6. The arithmetic mean of the following frequency distribution is 25, then the value of p is

C.I	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
F	5	18	15	p	6

(a) 12 (b) 16 (c) 18 (d) 20

7. If the mean of the following frequency distribution is 54, then the value of p is

C.I	0 – 20	20 – 40	40 – 60	60 – 80	80 –100
F	7	p	10	9	13

(a) 12 (b) 16 (c) 18 (d) 11

8. The mean of the following frequency distribution is

C.I	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
F	12	16	6	7	9

(a) 12 (b) 16 (c) 22 (d) 20

9. The mean of the following frequency distribution is

C.I	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
F	7	8	12	13	10

(a) 12.2 (b) 16.2 (c) 22.2 (d) 27.2

10. The median of the following frequency distribution is

C.I	100 – 150	150 – 200	200 – 250	250 – 300	300 – 350
F	6	3	5	20	10

(a) 120 (b) 160 (c) 220 (d) 270

MCQ WORKSHEET-III
CLASS X: CHAPTER - 14
STATISTICS

1. The range of the data 14, 27, 29, 61, 45, 15, 9, 18 is
(a) 61 (b) 52 (c) 47 (d) 53

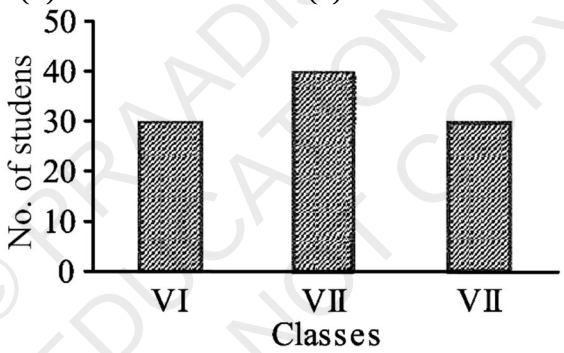
2. The class mark of the class 120 – 150 is
(a) 120 (b) 130 (c) 135 (d) 150

3. The class mark of a class is 10 and its class width is 6. The lower limit of the class is
(a) 5 (b) 7 (c) 8 (d) 10

4. In a frequency distribution, the class width is 4 and the lower limit of first class is 10. If there are six classes, the upper limit of last class is
(a) 22 (b) 26 (c) 30 (d) 34

5. The class marks of a distribution are 15, 20, 25,…….45. The class corresponding to 45 is
(a) 12.5 – 17.5 (b) 22.5 – 27.5 (c) 42.5 – 47.5 (d) none of these

6. The number of students in which two classes are equal.
(a) VI and VIII (b) VI and VII (c) VII and VIII (d) none of these



7. The mean of first five prime numbers is
(a) 5.0 (b) 4.5 (c) 5.6 (d) 6.5

8. The mean of first ten multiples of 7 is
(a) 35.0 (b) 36.5 (c) 38.5 (d) 39.2

9. The mean of x + 3, x – 2, x + 5, x + 7 and x + 72 is
(a) x + 5 (b) x + 2 (c) x + 3 (d) x + 7

10. If the mean of n observations $x_1, x_2, x_3, \ldots x_n$ is $\bar{x}$ then $\sum_{i=1}^{n} x_i - \bar{x}$ is
(a) 1 (b) –1 (c) 0 (d) cannot be found

11. The mean of 10 observations is 42. If each observation in the data is decreased by 12, the new mean of the data is
(a) 12 (b) 15 (c) 30 (d) 54

12. The median of 10, 12, 14, 16, 18, 20 is
(a) 12 (b) 14 (c) 15 (d) 16

13. If the median of 12, 13, 16, x + 2, x + 4, 28, 30, 32 is 23, when x + 2, x + 4 lie between 16 and 30, then the value of x is

(a) 18 (b) 19 (c) 20 (d) 22

14. If the mode of 12, 16, 19, 16, x, 12, 16, 19, 12 is 16, then the value of x is

(a) 12 (b) 16 (c) 19 (d) 18

15. The mean of the following data is

x	5	10	15	20	25
f	3	5	8	3	1

(a) 12 (b) 13 (c) 13.5 (d) 13.6

16. The mean of 10 numbers is 15 and that of another 20 number is 24 then the mean of all 30 observations is

(a) 20 (b) 15 (c) 21 (d) 24

MCQ WORKSHEET-IV
CLASS X: CHAPTER - 14
STATISTICS

1. Construction of cumulative frequency table is useful in determining the
(a) mean (b) median (c) mode (d) all three

2. In the formula $\bar{x} = a + \frac{\sum f_i d_i}{\sum f_i}$, finding the mean of the grouped data, d_i's are deviations from assumed mean 'a' of
(a) lower limits of classes (b) upper limits of classes
(c) class marks (d) frequencies of the classes.

3. If x_i's are the midpoints of the class intervals of grouped data, f_i's are the corresponding frequencies and x is the mean, then $\sum f_i(x_i - \bar{x})$ is equal to
(a) 0 (b) –1 (c) 1 (d) 2

4. In the formula $\bar{x} = a + \left(\frac{\sum f_i u_i}{\sum f_i} \times h \right)$, finding the mean of the grouped data, u_i =
(a) $\frac{x_i + a}{h}$ (b) $\frac{x_i - a}{h}$ (c) $\frac{a - x_i}{h}$ (d) $h(x_i - a)$

5. For the following distribution:

Class	0-5	5-10	10-15	15-20	20-25
Frequency	10	15	12	20	9

The sum of lower limits of the median class and the modal class is
(a) 15 (b) 25 (c) 30 (d) 35

6. Consider the following frequency distribution:

Class	0-9	10-19	20-29	30-39	40-49
Frequency	13	10	15	8	11

The upper limit of the median class is
(a) 29 (b) 29.5 (c) 30 (d) 19.5

7. The abscissa of the point of intersection of the less than type and of the more than type ogives gives its
(a) mean (b) median (c) mode (d) all three

8. For the following distribution: the modal class is

Marks	Below 10	Below 20	Below 30	Below 40	Below 50
No. of Students	8	17	32	62	80

(a) 10 – 20 (b) 20 – 30 (c) 30 – 40 (d) 40 – 50

9. From the following data of the marks obtained by students of class X

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	8	12	20	30	10	10

How many students, secured less than 40 marks?
(a) 70 (b) 40 (c) 80 (d) 30

10. The times in seconds taken by 150 athletics to run a 100m hurdle race are given as under:

Class	12.7-13	13-13.3	13.3-13.6	13.6-13.9	13.9-13.12
Frequency	5	6	10	55	41

The number of athletes who completed the race in less than 13.9 sec is

(a) 21 (b) 55 (c) 41 (d) 76

11. Consider the data:

Class	25-45	45-65	65-85	85-105	105-125	125-145
Frequency	4	5	12	20	14	11

The difference of the upper limit of the median class and the lower limit of the modal class is

(a) 0 (b) 19 (c) 20 (d) 38

12. Consider the following distribution:

Marks	Above 0	Above 10	Above 20	Above 30	Above 40	Above 50
No. of Students	63	58	55	51	48	42

The frequency of the class 30 – 40 is

(a) 3 (b) 4 (c) 48 (d) 41

PRACTICE QUESTIONS
CLASS X: CHAPTER - 14
STATISTICS
MEAN BASED QUESTIONS

1. Is it true to say that the mean, mode and median of grouped data will always be different. Justify your answer.

2. The mean of ungrouped data and the mean calculated when the same data is grouped are always the same. Do you agree with this statement? Give reason for your answer.

3. Find the mean of the distribution:

Class	1-3	3-5	5-7	7-9
Frequency	9	22	27	17

4. Daily wages of 110 workers, obtained in a survey, are tabulated below:

Daily wages (in Rs.)	100 - 120	120 - 140	140 - 160	160 - 180	180 - 200	200 - 220
No. of workers	15	18	25	22	18	12

Determine the mean wages of workers.

5. Calculate the mean of the scores of 20 students in a mathematics test :

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	2	4	7	6	1

6. Calculate the mean of the following data :

Class	4-7	8-11	12-15	16-19
Frequency	5	4	9	10

7. The following table gives the number of pages written by Sarika for completing her own book for 30 days :

No. of pages written per day	16-18	19-21	22-24	25-27	28-30
No. of days	1	3	4	9	13

Find the mean number of pages written per day.

8. The daily income of a sample of 50 employees are tabulated as follows :

Income(in Rs.)	1-200	201-400	401-600	601-800
No. of employees	14	15	14	7

9. The weights (in kg) of 50 wrestlers are recorded in the following table :

Weight(in kg)	100-110	110-120	120-130	130-140	140-150
No. of wrestlers	4	14	21	8	3

Find the mean weight of the wrestlers.

10. An aircraft has 120 passenger seats. The number of seats occupied during 100 flights is given below:

No. of seats	100-104	104-108	108-112	112-116	116-120
Frequency	15	20	32	18	15

Determine the mean number of seats occupied over the flights

11. The mileage (km per litre) of 50 cars of the same model was tested by a manufacturer and details are tabulated as given below :

Mileage(km/l)	10-12	12-14	14-16	16-18
No. of cars	7	12	18	13

Find the mean mileage. The manufacturer claimed that the mileage of the model was 16 km/litre. Do you agree with this claim?

12. The following table shows the cumulative frequency distribution of marks of 800 students in an examination:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60	Below 70	Below 80	Below 90	Below 100
No. of Students	8	17	32	62	80	80	80	80	80	80

Find the mean marks.

13. The following is the cumulative frequency distribution (of less than type) of 1000 persons each of age 20 years and above. Determine the mean age.

Age Below(in years)	30	40	50	60	70	80
No. of persons	100	220	350	750	950	1000

14. Find the mean marks of students for the following distribution :

Marks Above	0	10	20	30	40	50	60	70	80	90	100
No. of Students	80	77	72	65	55	43	28	16	10	8	0

15. Determine the mean of the following distribution :

Marks Below	10	20	30	40	50	60	70	80	90	100
No. of Students	5	9	17	29	45	60	70	78	83	85

16. Find the mean age of 100 residents of a town from the following data :

Age equal and above(in years)	0	10	20	30	40	50	60	70
No. of Persons	100	90	75	50	25	15	5	0

17. Find the mean weights of tea in 70 packets shown in the following table :

Weight(in gm)	200-201	201-202	202-203	203-204	204-205	205-206
No. of packets	13	27	18	10	1	1

18. Find the mean of the following distribution :

Class	0-20	20-40	40-60	60-80	80-100	100-120	120-140
Frequency	12	18	15	25	26	15	9

19. Find the mean age from the following distribution :

Age(in years)	25-29	30-34	35-39	40-44	45-49	50-54	55-59
No. of persons	4	14	22	16	6	5	3

20. Find the mean age of the patients from the following distribution :

Age(in years)	5-14	15-24	25-34	35-44	45-54	55-64
No. of patients	6	11	21	23	14	5

PRACTICE QUESTIONS
CLASS X: CHAPTER - 14
STATISTICS
MEDIAN BASED QUESTIONS

1. The median of an ungrouped data and the median calculated when the same data is grouped are always the same. Do you think that this is a correct statement? Give Reason.

2. The percentage of marks obtained by 100 students in an examination are given below:

Marks	30-35	35-40	40-45	45-50	50-55	55-60	60-65
No. of Students	14	16	18	23	18	8	3

Determine the median percentage of marks.

3. Weekly income of 600 families is as under:

Income(in Rs.)	0-1000	1000-2000	2000-3000	3000-4000	4000-5000	5000-6000
No. of Families	250	190	100	40	15	5

Compute the median income.

4. Find the median of the following frequency distribution:

Marks	0 – 5	5 – 10	10 – 15	15 – 20	20 – 25	25 – 30	30 – 35	35 – 40
Number of students	8	12	20	12	18	13	10	7

5. The following table gives the distribution of the life time of 500 neon lamps:

Life time (in hrs)	1500 – 2000	2000 – 2500	2500 – 3000	3000 – 3500	3500 – 4000	4000 – 4500	4500 – 5000
Number of Lamps	24	86	90	115	95	72	18

Find the median life time of a lamp.

6. The lengths of 40 leaves of a plant are measured correct to the nearest millimetre, and the data obtained is represented in the following table. Find the median length of the leaves.

Length(in mm)	118-126	127-135	136-144	145-153	154-162	163-171	172-180
No. of leaves	3	5	9	12	5	4	2

7. Find the median of the following frequency distribution:

Class	75-84	85-94	95-104	105-114	115-124	125-134	135-144
Frequency	8	11	26	31	18	4	2

8. Find the median marks from the following data:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50
Number of students	15	45	90	102	120

9. The following is the cumulative frequency distribution (of less than type) of 1000 persons each of age 20 years and above. Determine the median age.

Age Below(in years)	30	40	50	60	70	80
No. of persons	100	220	350	750	950	1000

10. Find the median age from the following distribution :

Age(in years)	25-29	30-34	35-39	40-44	45-49	50-54	55-59
No. of persons	4	14	22	16	6	5	3

11. Find the median marks for the following distribution:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60
No. of Students	6	15	29	41	60	70

12. Find the median marks for the following distribution:

Marks below	10	20	30	40	50	60	70	80
No. of Students	12	32	57	80	92	116	164	200

13. Find the median wages for the following frequency distribution:

Wages per day	61-70	71-80	81-90	91-100	101-110	111-120
No. of workers	5	15	20	30	10	8

14. Find the median marks for the following distribution:

Marks	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50
No. of Students	2	3	6	7	14	12	4	2

15. Find the median age of the patients from the following distribution :

Age(in years)	5-14	15-24	25-34	35-44	45-54	55-64
No. of patients	6	11	21	23	14	5

PRACTICE QUESTIONS
CLASS X: CHAPTER - 14
STATISTICS
MODE BASED QUESTIONS

1. Will the median class and modal class of grouped data always be different? Justify your answer.

2. The frequency distribution table of agriculture holdings in a village is given below:

Area of land(in ha)	1-3	3-5	5-7	79	9-11	11-13
No. of families	20	45	80	55	40	12

Find the modal agriculture holdings of the village.

3. The weight of coffee in 70 packets is shown below:

Weight (in gm):	200-201	201-202	202-203	203-204	204-205	205-206
No. of packets:	12	26	20	9	2	1

Determine the modal weight.

4. Find the mode marks from the following data:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50
Number of students	15	45	90	102	120

5. Find the mode of the following frequency distribution:

Marks	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Number of students	15	30	45	12	18

6. Find the mode of the following frequency distribution:

Marks	Less than 20	Less than 40	Less than 60	Less than 80	Less than 100
Number of students	4	10	28	36	50

7. The following table show the marks of 85 students of a class X in a school. Find the modal marks of the distribution:

Marks(Below)	10	20	30	40	50	60	70	80	90	100
Number of Students	5	9	17	29	45	60	70	78	83	85

8. Find the mode of the following frequency distribution:

Class	25-30	30-35	35-40	40-45	45-50	50-55
Frequency	25	34	50	42	38	14

9. Find the average height of maximum number of students from the following distribution:

Height(in cm)	160-162	163-165	166-168	169-171	172-174
No. of students	15	118	142	127	18

10. Compare the modal ages of two groups of students appearing for an entrance examination:

Age(in years)	16-18	18-20	20-22	22-24	24-26
Group A	50	78	46	28	23
Group B	54	89	40	25	17

11. Find the mode age of the patients from the following distribution :

Age(in years)	6-15	16-25	26-35	36-45	46-55	56-65
No. of patients	6	11	21	23	14	5

12. 100 surnames were randomly picked up from a local telephone directory and the frequency distribution of the number of letters in the English alphabets in the surnames was obtained as follows:

Number of letters	1 - 4	4 - 7	7 - 10	10 - 13	13 - 16	16 - 19
Number of surnames	6	30	40	16	4	4

Determine the median number of letters in the surnames. Find the mean number of letters in the surnames? Also, find the modal size of the surnames.

13. Find the mean, mode and median for the following frequency distribution.

Class	0-10	10-20	20-30	30-40	40-50	Total
Frequency	8	16	36	34	6	100

14. A survey regarding the heights (in cms) of 50 girls of a class was conducted and the following data was obtained.

Height(in cm)	120-130	130-140	140-150	150-160	160-170	**Total**
No. of girls	2	8	12	20	8	**50**

Find the mean, median and mode of the above data.

15. Find the mean, mode and median marks for the following frequency distribution.

Marks	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50	Less than 60
No. of Students	2	3	6	7	14	20

16. Find the mean, mode and median for the following frequency distribution.

Class	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Frequency	14	22	16	6	5	3	4

17. Find the mean, mode and median for the following frequency distribution.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	5	10	18	30	20	12	5

18. Find the mean, mode and median for the following frequency distribution.

Class	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Frequency	3	13	21	15	5	4	2

19. Find the mean, mode and median for the following frequency distribution.

Class	500-520	520-540	540-560	560-580	580-600	600-620
Frequency	14	9	5	4	3	5

20. Find the mean, mode and median age in years for the following frequency distribution.

Age in years	10 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69
No. of persons	8	8	10	14	28	32

PRACTICE QUESTIONS
CLASS X: CHAPTER - 14
STATISTICS
MISSING FREQUENCY BASED QUESTIONS

1. The mean of the following distribution is 18. The frequency *f* in the class interval 19-21 is missing. Determine *f*.

Class	11-13	13-15	15-17	17-19	19-21	21-23	23-25
Frequency	3	6	9	13	f	5	4

2. The mean of the following distribution is 24. Find the value of p.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	15	20	35	P	10	42

3. Find the missing frequencies f_1 and f_2 in table given below; it is being given that the mean of the given frequency distribution is 50.

Class	0-20	20-40	40-60	60-80	80-100	Total
Frequency	17	f_1	32	f_2	19	120

4. Find the missing frequencies f_1 and f_2 in table given below; it is being given that the mean of the given frequency distribution is 145.

Class	100-120	120-140	140-160	160-180	180-200	**Total**
Frequency	10	f_1	f_2	15	5	**80**

5. The mean of the following frequency distribution is 57.6 and the sum of the observations is 50. Find f_1 and f_2.

Class	0-20	20-40	40-60	60-80	80-100	100-120
Frequency	7	f_1	12	f_2	8	5

6. The mean of the following frequency distribution is 28 and the sum of the observations is 100. Find f_1 and f_2.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	12	18	f_1	20	f_2	6

7. The mean of the following frequency distribution is 53. But the frequencies a and b in the classes 20-40 and 60-80 are missing. Find the missing frequencies.

Age (in years)	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100	Total
Number of people	15	a	21	b	17	100

8. Compute the missing frequencies x and y in the following data if the mean is $166\frac{9}{26}$ and the sum of the frequencies is 52:

Class Interval	140 – 150	150 – 160	160 – 170	170 – 180	180 – 190	190 – 200
Frequency	5	x	20	y	6	2

9. If the median of the distribution given below is 28.5, find the values of *x* and *y*.

C. I.	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
F	5	x	20	15	y	5

10. The median of the following data is 525. Find the values of x and y, if the total frequency is 100.

C.I	0-100	100-200	200-300	300-400	400-500	500-600	600-700	700-800	800-900	900-1000
F	2	5	x	12	17	20	y	9	7	4

11. The median of the following data is 28. Find the values of x and y, if the total frequency is 50.

Marks	0-7	7-14	14-21	21-28	28-35	35-42	42-49
No. of Students	3	x	7	11	y	16	9

12. Find the missing frequencies in the following frequency distribution table, if the total frequency is 100 and median is 32.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	10	x	25	30	y	10

13. Find the missing frequencies in the following frequency distribution table, if the total frequency is 70 and median is 35.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	6	9	x	y	19	10

14. The median of the following data is 167. Find the values of x.

Height(in cm)	160-162	163-165	166-168	169-171	172-174
Frequency	15	117	x	118	14

15. The mode of the following data is 36. Find the values of x.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	10	x	16	12	6	7

16. Find the missing frequencies in the following frequency distribution table, if the total frequency is 100 and mode is $46\frac{2}{3}$.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	5	8	7	x	28	20	10	y

PRACTICE QUESTIONS
CLASS X: CHAPTER - 14
STATISTICS
OGIVE BASED QUESTIONS

1. Is it correct to say that an ogive is a graphical representation of a frequency distribution? Give reason.

2. Which measure of central tendency is given by the x – coordinate of the point of intersection of the more than ogive ad less than ogive?

3. The following is the distribution of weights (in kg) of 40 persons:

Weight(in kg)	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80
No. of persons	4	4	13	5	6	5	2	1

Construct a cumulative frequency distribution (of less than type) table for the data above.

4. Find the unknown entries a, b, c, d, e, f in the following distribution of heights of students in a class:

Height(in cm)	150-155	155-160	160-165	165-170	170-175	175-180
Frequency	12	b	10	d	e	2
Cumulative Frequency	a	25	c	43	48	f

5. Following is the age distribution of a group of students. Draw the cumulative frequency curve less than type and hence obtain the median from the graph.

Age(in years)	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16
No. of students	36	42	52	60	68	84	96	82	66	48	50	16

6. For the following distribution, draw the cumulative frequency curve more than type and hence obtain the median from the graph.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	5	15	20	23	17	11	9

7. Draw less than ogive for the following frequency distribution:

Marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Number of students	5	8	6	10	6	6

Also find the median from the graph and verify that by using the formula.

8. The table given below shows the frequency distribution of the cores obtained by 200 candidates in a BCA examination.

Score	200-250	250-300	300-350	350-400	400-450	450-500	500-550	550-600
No. of students	30	15	45	20	25	40	10	15

Draw cumulative frequency curves by using (i) less than type and (ii) more than type. Hence find median

9. Draw less than and more than ogive for the following frequency distribution:

Marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Number of students	8	5	10	6	6	6

Also find the median from the graph and verify that by using the formula.

10. The following table gives production yield per hectare of wheat of 100 farms of a village.

production yield (in kg/ha)	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80
Number of farms	2	8	12	24	38	16

Change the distribution to a more than type distribution, and draw its ogive.

11. The following table gives the heights (in meters) of 360 trees:

Height (in m)	Less than 7	Less than 14	Less than 21	Less than 28	Less than 35	Less than 42	Less than 49	Less than 56
No. of trees	25	45	95	140	235	275	320	360

From the above data, draw an ogive and find the median

12. From the following data, draw the two types of cumulative frequency curves and determine the median from the graph.

Height(in cm)	Frequency
140-144	3
144-148	9
148-152	24
152-156	31
156-160	42
160-164	64
164-168	75
168-172	82
172-176	86
176-180	34

13. For the following distribution, draw the cumulative frequency curve more than type and hence obtain the median from the graph.

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60
No. of Students	6	15	29	41	60	70

14. For the following distribution, draw the cumulative frequency curve less than type and hence obtain the median from the graph.

Age equal and above(in years)	0	10	20	30	40	50	60	70
No. of Persons	100	90	75	50	25	15	5	0

15. During the medical check-up of 35 students of a class, their weights were recorded as follows: Draw a less than type ogive for the given data. Hence obtain the median weight from the graph and verify the result by using the formula.

Weight (in kg)	Less than 38	Less than 40	Less than 42	Less than 44	Less than 46	Less than 48	Less than 50	Less than 52
No. of students	0	3	5	9	14	28	32	35