## ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian minority Institution
Subject: Mathematics
Class- X
Date:23/11/2020

Answer key of Worksheet-6

## Chapter: statistics

## Topic- Median and Mode

1.Choose the correct alternative.

$$
1 \times 15=15
$$

a) Median for grouped data is $1+\frac{\frac{n}{2}-}{f} \times \mathrm{c} \quad$ i) absolute frequency of the premedian class ii) less than type cumulative frequency of the pre-median class iii) frequency density of the pre-median class iv) none of these b) nine conical flasks have sodium chloride solution of different quantities. The amount of solution in each flask is given below $2,10,16,2,20,18,22,14,9$. Then median is
i) $\quad 14$
ii) 12.6
iii) 16
iv) 18
C) Scores obtained by 10 students in a quiz are $11,6,7,13,1,13,16,7,13,16$. Then median is i) 8 ii) 7 iii) $13 \quad$ iv) 16
d) Mode is the i) middle most frequent value ii) least frequent value iii) maximum frequent value iv) none of these
e) Which of the following can not be determined graphically?
i) mean
ii) median
iii) mode
iv) none of these
f)

| C.I | $0-5$ | $6-11$ | $12-17$ | $18-23$ | $24-29$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| F | 26 | 20 | 30 | 16 | 22 |

The upper limit of the median class is i) 18.5 ii) 18 iii) 17.5 iv) 17
g)

| marks | Less than <br> 20 | Less than <br> 40 | Less than <br> 60 | Less than <br> 80 | Less than <br> 100 | Less than <br> 120 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No of <br> students | 4 | 12 | 25 | 56 | 74 | 80 |

The modal class is i) 20-40 $\begin{array}{llll}\text { ii) } 40-60 & \text { iii) } 60-80 & \text { iv) } 80-100\end{array}$
h) To find the $\qquad$ you put all the numbers in order from least to greatest and find the number that is in the middle.
i) mean ii) median iii) mode iv) none of these
i) The mode score on the $6^{\text {th }}$ grade maths test was 94 .Which of these interpretations must be correct?
i)more students received 94 than any other score
ii) no one scored below 50
iii)A score of 91 was slightly below average
iv) 99 is the highest score in the class
j)

| Length of <br> diameter | 44 | 45 | 46 | 47 | 48 | 49 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| frequency | 12 | 15 | 23 | 20 | 15 | 16 |

What is the median of the above data?
i)
46.5
ii) 46
iii) 47.5
iv) 48.5
k)we have recorded the number of days one student was present in school in this month.These are 20 days, 25 days, 10 days, 18 days, 21 days, 18 days, 16 days, 22 days.Find the median of the number of days .
i) 20 days
ii) 18 days
iii) 19 days
iv) 25 days
l)The selling price of Madhu's uncle's shop per day in the last week were 107, 201, 92, $52,113,75,195$. find the median.
i) Rs 106
ii) Rs 107
iii) Rs 109
iv) Rs 201
$m$ )If the age (in years) of some animals are $6,10,5,4,9,11,20,18$. Find the median.
$\begin{array}{llll}\text { i) } 9.5 \text { years } & \text { ii) } 9 \text { years } & \text { iii) } 8.5 \text { years } & \text { iv) none of these }\end{array}$
n)

| Class <br> interval | $51-60$ | $61-70$ | $71-80$ | $81-90$ | $91-100$ | $101-110$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| frequency | 4 | 10 | 15 | 20 | 15 | 4 |

Find the median.
i) 84
ii) 83
iii) $81 \quad$ iv) 80
o)If 35 is removed from the data $30,34,35,36,37,38,39,40$ then the median increases by
i) 2 ii) 1.5 iii) 1 iv) 0.5

