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MATHS

BOOKS - CALCUTTA BOOK HOUSE

MATHS (BENGALI ENGLISH)

FREQUENCY DISTRIBUTIONS OF GROUPED DATA

Examples Mcq

1. Which one of the following is the pictorial representation of data?

A. raw data

B. bar diagram

C. cumulative frequency

D. frequency distribution

Answer: B

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2. The range of the data 12,25,15,18,17,20,22,26,6,16,11,8,19,10,30,20,32 is

A. 10

B. 15

C. 18

D. 26

Answer: D

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3. The class-length of 1-5,6-10,.....is equal to

A. 4

B. 5

C. $4-5$

D. $5-5$

Answer: B

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4. The mid-values of the class-intervals of a frequency distribution are respectively 15,20,25,30,..... The class interval of which the mid-value is 20 is

A. $12.5 - 17.5$

B. $17.5 - 22.5$

C. $18.5 - 21.5$

D. $19.5 - 20.5$

Answer: B

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5. The mid-value of a class-interval of a frequency distribution is 10 and the class-length of each class is 6, The lower class limit of the class-interval is

A. 6

B. 7

C. 8

D. 12

Answer: B

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Examples Short Answer Type Question

1. Find the lower class-boundary of the continuous frequency distribution of which the mid-value is m and the upper class-boundary is u.

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2. The mid-value of a class-interval of a continuous frequency distribution is 42 and its class-length is 10.Find the lower and upper class-limits of the class-intervals.

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3. Find the ratio in which the points (2, y) divides the line segment joining the points A (-2, 2) and B (3, 7). Also, find the value of y.

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4. Find the relative frequency of the last class-interval of question no.(iii) above.

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5. Determine which of the following are attributes and which are variables:

a) Number of members of a family b) Daily temperature c) Educational standard d) Montly income

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Examples Long Answer Type Question

1. If A (-1, 3), B (1, -1) and C (5, 1) are the vertices of a triangle ABC, find the length of the median through A.

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2. If the mid-point of the line joining (3, 4) and (k, 7) is (x, y) and $2x + 2y + 1 = 0$, find the value

of k.

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3. Find the ratio in which the line segment joining the pionts A (3, -3) and B (-2, 7) is divided by x-axis. Also, find the coordinates of the point of division.

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4. In what ratio does the point (-4, 6) divide the line segment joining the points A (-6, 10) and B (3, -8) ?

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Exercise 1 Mcq

1. The mid-values of the class-intervals of a frequency distribution are respectively

11,14,17,20..... The class interval of which the mid-value is 17 is

A. $15.5 - 18.5$

B. $14.5 - 19.5$

C. $12.5 - 21.5$

D. $11.5 - 22.5$

Answer: A

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2. The class-length of the class-intervals 1-4,5-8,.....is

A. 3

B. 4

C. 2

D. $3 - 5$

Answer: B

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3. The mid-value of a class-interval of a frequency distribution is x and its lower -boundary is y. Then its upper -boundary=

A. 2x

B. $2y - x$

C. $2x + y$

D. $2x - y$

Answer: D

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4. The range of the data 10,11,17,6,3,12,21,24,9,8,25 is

A. 3

B. 10

C. 11

D. 22

Answer: D

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5. Which of the followings denotes an attribute?

A. The number of girls in class-IX

B. The heights of the girls in class-IX

C. The weights of the girls in class-IX

D. None of these

Answer: D

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6. The marks obtained in the Madhyamik exam, is

A. a variable

B. an attribute

C. a frequency

D. a frequency density

Answer: A

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Exercise 1 Short Type Answer Question

1. The class-mark and class-length of a class-interval are 22 and 10 respectively.Find its lower and upper class-boundaries.

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2. Find the ratio in which the y-axis divides the line segment joining the points (5, -6) and (-1, -4). Also, find the coordinates of the point of division.

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3. Find the relative frequency of the second class-interval of the above(q-(iii)) frequency distribution.

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4. The class-mark of a class interval of a frequency distribution is m and its class-

length is l. Find its lower and upper class-limits.

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5. Determine the third class-interval of the classes 10-19,20-29,.....and find its lower and upper class-boundaries.

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Exercise 1 Long Type Answer Question

1. Define:

class-interval

2. Define:

lower-class limit and upper class-limit

3. Define:

class-boundary , lower and upper class boundaries

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4. Define:

class-length

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5. What do you mean by class-frequency ? What is relative class-frequency of any class-interval?

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6. IF the class-frequency of the class 19.5-29.5 be 7, then what is its frequency density?

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7. Find the co-ordinates of the points which divide the line segment joining the points (-4, 0) and (0, 6) in four equal parts.

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8. Show that the mid-point of the line segment joining the points (5, 7) and (3, 9) is also the mid-point of the line segment joining the points (8, 6) and (0, 10).

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9. Find the distance of the point (1, 2) from the mid-point of the line segment joining the points (6, 8) and (2, 4).

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10. If A and B are (1, 4) and (5, 2) respectively, find the co-ordinates of P when $\frac{AP}{BP} = \frac{3}{4}$

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11. Determine the ratio in which the point (-6, a) divides the join of A (-3, -1) and B (-8, 9). Also find the value of a.

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12. a,b and c are in A.P. Prove that $b + c$, $c + a$ and $a + b$ are in A.P.

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13. If 9^{th} term of an A.P. is zero, prove that its 29^{th} term is double the 19^{th} term.

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14. An A.P. consists of $60 terms$ .If the first and the last terms be 7 and 125 respectively, find 32^{nd} term.

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