MATHS

NCERT - NCERT Maths(TELUGU)

DATA HANDLING

Exercise

1. In a unit test Amar secured 20, 18, 23, 21, 24 and 22 marks in Telugu, Hindi, English, Mathematics, Science and Social Science

respectively. Peter got 23, 21,20,19,24 and 17 marks in the above subjects respectively. Interpret the data in the organize manner. The ages (in years) of players are in a team of 16, 16, 16, 14, 17, 18. Then find the following. i) Age of the youngest and the oldest ii) Mean age of the players.

2. What is the average number of glasses of water that you drink per day in a week? How

did you find the average?

3. Maximum day time temperatures of Hyderabad in a week (from 26th February to 4th March, 2011) are recorded as $26°C, 27°C, 30°C, 30°C, 32°C, 33°C$ and $32°C$: What is the maximum temperature of the week?

4. Rice consumed in a school under the mid-day meal program for 5 consecutive days is 15.750kg, 14.850kg, 16.500kg, 14.700Kg and 17.700 kg. Find the average rice consumption for the 5 days.

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5. In a village three different crops are cultivated in four successive years. The profit (in rupees) on the crops, per acre is shown in the table below. i) Calculate the mean profit

for each crop over the 4 years. ii) Based on your answers, which crop should be cultivated in the next year?

Crop	2005	2006	2007	2008
Ground nuts	7000	8000	7500	7500
Jawar	6000	1000	8000	1000
Millets	9000	5000	3000	4000

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6. The number of passengers who travelled In RTC bus from Adilabad to Nirmal in 4 trips in a day are 39, 30, 45 and 54.What is the average

number of passengers travelling per trip in a day?

7. The following table shows the marks scored by Anju, Neelu and Lekhya in four unit tests of English. i) Find the average marks obtained by Lekhya. ii) Find the average marks secured by Anju. Will you divide the total marks by 3 or 4? Why? iii) Neelesh has given all four tests. Find the average marks secured by him. Will you

divide the total marks by 3 or 4? Why? iv) Who performed best in the English?

Name of the Student	Unit Test I	Unit Test II	Unit Test III	Unit Test IV
Anju	Absent	19	23	21
Neelesh	0	20	22	24
Lekhya	20	24	24	24

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8. Three friends went to a hotel and had breakfast to their taste, paying ₹16, ₹17 and ₹21 respectively i) Find their mean expenditure. ii) If they have spent 3 times the amount that they have already spent, what would their mean expenditure be? iii) If the

hotel manager offers 50% discount, what would their mean expenditure be? iv) Do you notice any relationship between the change in expenditure and the change n mean expenditure?

9. Find the mean of the first ten natural numbers.

10. Find the mean of the first twenty natural numbers.

11. In a set of four Integers, the average of the two smallest integers is 102, the average of the three smallest integers is 103, the average of all four is 104. Which is the greatest of these integers?

12. Write at least two questions to find the mean, giving suitable data.

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13. A batsman scored the following number of runs in six innings 36, 35, 50, 46, 60, 55. Calculate the mean runs scored by him in an inning.

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14. Find the mean of first five whole numbers.

15. The heights of 10 girls were measured in cm and the results are as follows. 135, 150, 139, 128, 151, 132, 146, 149, 143, 141. i) What is the height of the tallest girl? ii) What is the range of the data?

16. Maximum day time temperatures of Hyderabad in a week (from 26th February to 4th March, 2011) are recorded as $26°C$, $27°C$, $30°C$, $30°C$, $32°C$, $33°C$ and $32°C$: What is the maximum temperature of the week?

17. Find the mean of the first ten natural numbers.

18. The mean of first five prime numbers is ....

19. In a set of four Integers, the average of the two smallest integers is 102, the average of the three smallest integers is 103, the average of all four is 104. Which is the greatest of these integers?

20. Find the modes of the following data. i) 5, 6, 3, 5, 4, 9, 5, 6, 4, 9, 5 ii) 25, 14, 18, 15, 17, 16, 19, 13, 12, 24 iii) 10, 15, 20, 15, 20, IO, 15, 20, 10

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21. Long jumps by 7 students of a team are 98cm, l25cm, l40cm, 155cm, l74cm, l40cm and l55cm. Find the mode of the data.

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22. Ages of players in a cricket team are 25, 26, 25, 27, 28, 30, 31, 27, 33, 27, 29, Find the mean and mode of the data.

23. Find the mode of the following data 12, 24, 36, 46, 25, 38, 72, 36, 25, 38, 12, 24, 46, 25,12,24 ,46, 25, 72, 12, 24, 36, 25, 38 and 36.

24. Decide whether mean or mode is a better representative value in the, following situations. i) A shopkeeper, who sells tooth paste tubes of different sizes, wants to decide which size is to be ordered more. ii) An invigilator wants to bring sufficient number of additional papers to the examination hall. iii) Preparation of the number of laddus for a marriage. iv) For finding the favorite cricketer in a class.

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25. Find the mode of the numbers 2, 2, 2, 3, 3,

4, 5, 5, 5, 6, 6, 8.

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26. Find the mode of the data 13, 16, 12, 14, 19,

12, 14, 13, 14.

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27. What is the mode of first 10 natural

numbers?

28. Find the Range of first 10 natural numbers.

29. Say true or false and why? The difference between the largest and smallest observations in a data set is called the mean.

30. Say True or False and why ? In a bar graph, the bar which has greater length may contains mode.

31. Say true or false and why? Value of every observation in the data set is taken into account when median is calculated.

32. Say true or false and why? The median of a set of numbers is always one of the numbers.

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33. The monthly income (in rupees) of 7 households in a village are 1200, 1500, 1400, 1000, 1000,1600, 10000. If one more household with monthly income of Rs. 1500 is added, what will the median income be?

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34. Observations of a data are 16, 72, 0, 55, 65,55, 10 and 41. Chaitanya calculated the mode and median without taking the zero into consideration. Did Chaitanya do the right thing?

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35. How many distinct sets of three positive integers have a mean of 6, a median of 7, and no mode?

36. Four integers are added to a group of Integers 3, 4, 5, 5 and 8 and the mean, median and mode of the data increases by 1 each. What is the greatest integer in the new group of integers?

37. Find the median of first 5 natural numbers.

38. Find the median of the data 13, 16, 12, 14, 19, 12, 14, 13, 14.

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39. Find the median of the data 24, 36, 46, 17, 18, 25, 35.

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40. Find the mode of the data 3, 5, 9, 6, 5, 9, 2, 9, 3, 5.

41. Long jumps by 7 students of a team are 98cm, l25cm, l40cm, 155cm, l74cm, l40cm and l55cm. Find the mode of the data.

42. Find the median of 49, 48, 15, 20, 28, 17, 14

and 110.

43. How many distinct sets of three positive

integers have a mean of 6, a median of 7, and

no mode?

44. Draw a bar graph for the following data.

Population of India in successive census years-

Year	1941	1951	1961	1971	1981	1991	2001
Population (in millions) (approx)	320	360	440	550	680	850	1000

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45. Draw a pie chart for the following data.

Item of expenditure	Food	Health	Clothing	Education	Savings
Amount spent in rupees	3750	1875	1875	1200	7500

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46. Draw a double bar graph for the following data. Birth and Death rates of different states

State	Birth Rate (Per 1000)	Death Rate (Per 1000)
Andhra Pradesh	22	8
Karnataka	22	8
Tamil Nadu	19	8
Kerala	18	6
Maharashtra	21	8
Orissa	24	11

in 1999.

47. Draw a pie chart for the following data. Time spent by a child during a day-

Time spent for	Sleep	School	Play	Others
Time spent	8 hrs	6hrs	2hrs	8 hrs

48. The adjoining pie chart gives the expenditure on various items during a month for a family. (The numbers written around the pie chart tell us the angles made by each sector at the centre.)
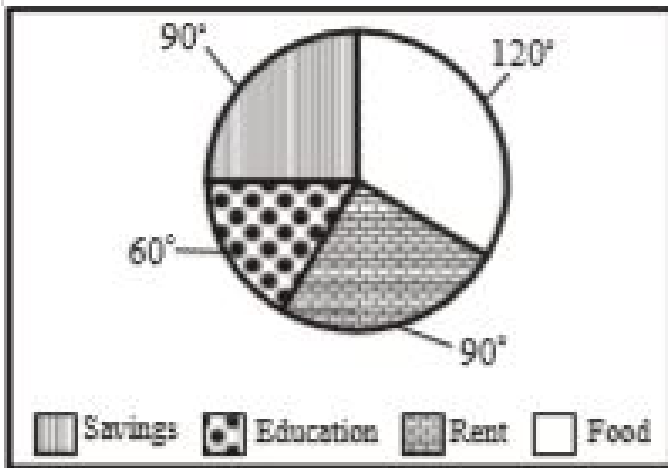
Answer the following-

On which item is the expenditure minimum?

49. Draw a bar diagram representing the following   data.

Year	1982	1983	1984	1985	1986	1987	1990	1995
No. of B & W TV sets Produced in India in lakhs	5.7	6.6	10.00	18.0	21.5	38.0	58.0	100.0

50. Kapildev is a Cricketer who created a world record by taking 432 wickets in Test Cricket. Here is a table giving the number of wickets taken by him against each Country. Represent

the data in a pie diagram.

Country	No. of wickets taken
South Africa	8
Newzealand	23
England	85
Pakistan	99
West Indies	89
Australia	79
Srilanka	45
Zimbabwe	4

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51. Out of a total of 100 schools in a locality management-wise division is given below: Zilla Praja Parishad — 60, Private Management — 22, Municipality — 16, Government — 6. Represent the above data in a pie diagram.

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52. Maximum day time temperatures of Hyderabad in a week (from 26th February to 4th March, 2011) are recorded as

$26^\circ C, 27^\circ C, 30^\circ C, 30^\circ C, 32^\circ C, 33^\circ C$ and $32^\circ C$: What is the average temperature of the week?

53. Maximum day time temperatures of Hyderabad in a week (from 26th February to 4th March, 2011) are recorded as $26^\circ C, 27^\circ C, 30^\circ C, 30^\circ C, 32^\circ C, 33^\circ C$ and $32^\circ C$: What is the average temperature of the week?

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l55cm. Find the mode of the data.

56. Find the mode of the following data 12, 24, 36, 46, 25, 38, 72, 36, 25, 38, 12, 24, 46, 25,12,24 ,46, 25, 72, 12, 24, 36, 25, 38 and 36.

57. Four integers are added to a group of Integers 3, 4, 5, 5 and 8 and the mean, median

and mode of the data increases by 1 each. What is the greatest integer in the new group of integers?

58. The number of passengers who travelled In RTC bus from Adilabad to Nirmal in 4 trips in a day are 39, 30, 45 and 54.What is the average number of passengers travelling per trip in a day?

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60. Find the mean of the first five prime numbers.

> ▶ **Watch Video Solution**

61. Observations of a data are 16, 72, 0, 55, 65,55, 10 and 41. Chaitanya calculated the mode and median without taking the zero into consideration. Did Chaitanya do the right thing?

62. Draw a bar graph for the following data. Population of India in successive census years-

Year	1941	1951	1961	1971	1981	1991	2001
Population (in millions) (approx)	320	360	440	550	680	850	1000

63. Draw a pie chart for the following data.

Item of expenditure	Food	Health	Clothing	Education	Savings
Amount spent in rupees	3750	1875	1875	1200	7500

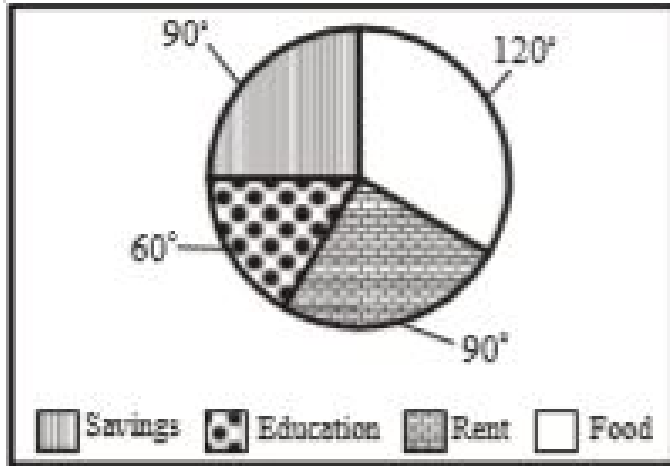**64.** The adjoining pie chart gives the expenditure on various items during a month for a family. (The numbers written around the pie chart tell us the angles made by each

sector at the centre.)

Answer the following-

On which item is the expenditure minimum?

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65. The following table shows the marks scored by Anju, Neelu and Lekhya in four unit tests of English. i) Find the average marks obtained by Lekhya. ii) Find the average marks secured by Anju. Will you divide the total marks by 3 or 4? Why? iii) Neelesh has given all four tests. Find the average marks secured by him. Will you divide the total marks by 3 or 4? Why? iv) Who performed best in the English?

Name of the Student	Unit Test I	Unit Test II	Unit Test III	Unit Test IV
Anju	Absent	19	23	21
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66. Decide whether mean or mode is a better representative value in the, following situations. i) A shopkeeper, who sells tooth paste tubes of different sizes, wants to decide which size is to be ordered more. ii) An invigilator wants to bring sufficient number of additional papers to the examination hall. iii) Preparation of the number of laddus for a marriage. iv) For finding the favorite cricketer in a class.

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67. Say true or false and why? The difference between the largest and smallest observations in a data set is called the mean.

68. Say true or false and why? In a bar graph, the bar which has the greater length indicates mode.

69. Say true or false and why? Value of every observation in the data set is taken into account when median is calculated.

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70. Say true or false and why? The median of a set of numbers is always one of the numbers.

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71. In a village three different crops are cultivated in four successive years. The profit (in rupees) on the crops, per acre is shown in the table below. i) Calculate the mean profit for each crop over the 4 years. ii) Based on your answers, which crop should be cultivated in the next year?

Crop	2005	2006	2007	2008
Ground nuts	7000	8000	7500	7500
Jawar	6000	1000	8000	1000
Millets	9000	5000	3000	4000

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72. Fill in the blanks: The mean of 2, 4, 6 is..........

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73. Fill in the blanks: The Am of first 11 natural

numbers is..........

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74. Fill in the blanks: Range of first 10 natural

numbers is..........

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75. Fill in the blanks: The median of 3, 5, 4, 12, 0, is..........

76. Fill in the blanks: Median of 49, 48, 15, 20, 28, 17, 14 and 10 is..........

77. Fill in the blanks: In a class there are 36 boys and 24 girls the sector angle showing the boys in pie diagram is..........

78. Fill in the blanks: A certain man saves 309% of his income. The angle of the sector indicating his savings..........

79. Fill in the blanks: If the scale of a graph is 1cm = 10,000 km then 2.8 cm =..........

80. Fill in the blanks: If 1cm = 10 crores then the length of the bar to represent 25 crores is..........

81. Fill in the blanks: In a given data three angles are in the ratio 2:3:4. The angle of the largest sector when the given data is represented in pie diagram is..........

82. A data of 10 observations has a minimum value 15 and maximum value 25. What is the mean of the data?

A. a. 12

B. b. 17

C. c. 27

D. d. 14

Answer:

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83. Observations of a data are 23, 45, 33, 21, 48, 30, 34, 36 and 35. Without actual calculation choose the mean of the data.

A. 20

B. 35

C. 48

D. 50

Answer:

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84. The information collected is called ....

A. Data

B. Score

C. Mode

D. None

Answer:

85. $\dfrac{(\text{Sum of observations})}{(\text{Number of observations})} = ...$

A. Mode

B. Median

C. Mean

D. None

Answer:

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86. The middle most value in a data is called...........

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87. The observation which occurs most frequently in a data is called..........

88. Sum of the central angles in a circle is ....

    A. $180°$

    B. $90°$

    C. $360°$

D. $300°$

Answer:

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89. Most dependable average is..........

A. Range

B. Mean

C. Median

D. Mode

Answer:

90. ....is based on all observations.

A. Median

B. Mode

C. Mean

D. None

Answer:

91. ....of all bars is same in bar graph.

A. Width

B. Length

C. Area

D. None

Answer:

92. Pie diagram consists of ....

    A. Rectangles

    B. Circles

    C. Sectors

    D. Squares

Answer:

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93. In bar graphs_____is not same

A. Length

B. Width

C. Mean

D. None

Answer:

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Example

1. Earnings (in rupees) of a vegetable vendor in a week are ₹200, ₹150, ₹180, ₹300, ₹160, ₹170 and ₹170. Find his average earning, per day.

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2. In a family, ages (in years) of members, Krishna, Radhika, Niharika and Nikhil are 44, 39, 17 and 12 : Find the arithmetic mean of their ages.

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3. A shop keeper wants to find out which cooking oil he should stock in more number. For this, he maintains a record of cooking oil sale for the week in the form of the table given below.In such a situation will calculating the mean number of oil packets sold help the shopkeeper to take a decision?

Day	Packets of oil sold
Mon	GGGSSSSPP
Tue	GGGSSSSSPP
Wed	GGSSSSSP
Thu	GGGSSSP
Fri	GGGSSPP
Sat	GSSSSSSSS
Sun	GGGSSSP

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4. Find the mode of the given set of numbers

2,3,5,3,4,7,3,2,1,7,3.

5. Find the mode of the data 3, 5, 9, 6, 5, 9, 2, 9, 3, 5.

6. Following are the marks obtained by 50 students in a unit test, which is administered for 10 marks. Find the mode of the data.

Marks obtained	No of students
00	2
1	1
2	2
3	1
4	-
5	4
6	10
7	15
8	9
9	5
10	1
Total	50

7. In which of the following situations, is the mode an appropriate representative value? A shopkeeper selling shirts, needs to decide which size of shirts to order more.

8. In which of the following situations, is the mode an appropriate representative value? For purchasing rice for a party of 20 people.

9. In which of the following situations, is the mode an appropriate representative value? For purchasing rice for a party of 20 people.

10. The monthly incomes of 7 graduates is ₹8000, ₹9000, ₹8200, ₹7900, ₹8500, ₹8600 and ₹60000. Find the median income.

11. Find the median of 49, 48, 15, 20, 28, 17, 14 and 110.

12. The following are the marks in Maths and Science of five students in class VII. Present

this data in the form of a double bar graph.

Name of Student	Maths	Science
Saravan	70	75
Raman	35	30
Mani	65	75
Renuka	90	100
Girija	22	35
Sharmila	50	50

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13. Earnings (in rupees) of a vegetable vendor in a week are ₹200, ₹150, ₹180, ₹300, ₹160, ₹170 and ₹170. Find his average earning, per day.

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14. In a family, ages (in years) of members, Krishna, Radhika, Niharika and Nikhil are 44, 39, 17 and 12 : Find the arithmetic mean of their ages.

15. In a family, ages (in years) of members, Krishna, Radhika, Niharika and Nikhil are 44, 39, 17 and 12 :What were their ages 5 years before ? Find their mean age.

16. In a family, ages (in years) of members, Krishna, Radhika, Niharika and Nikhil are 44, 39, 17 and 12.

Can you see a relationship between the change in mean and the number of years.

17. Find the mode of the given set of numbers-

2,3,5,3,4,7,3,2,1,7,3,3,1,3

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18. Find the mode of the data 3, 5, 9, 6, 5, 9, 2, 9, 3, 5.

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19. In which of the following situations, is the mode an appropriate representative value? A shopkeeper selling shirts, needs to decide which size of shirts to order more.

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20. In which of the following situations, is the mode an appropriate representative value? For purchasing rice for a party of 20 people.

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21. In which of the following situations, is the mode an appropriate representative value? For purchasing rice for a party of 20 people.

22. The monthly incomes of 7 graduates is ₹8000, ₹9000, ₹8200, ₹7900, ₹8500, ₹8600 and ₹60000. Find the median income.

23. Find the median of 49, 48, 15, 20, 28, 17, 14 and 110.

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1. Look at your school information board. Do you find any data tables there? Find out who uses this data.

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2. The ages (in years) of players are in a team of 16, 16, 16, 14, 17, 18. Then find the following:

(i) Age of the youngest and the oldest player.

(ii) Mean age of the players.

What is the average number of glasses of water that you drink per day? in a week. How did you find the average?

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3. A data of 10 observations has a minimum value 15 and maximum value 25. What is the mean of the data?

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4. Observations of a data are 23, 45, 33, 21, 48, 30, 34, 36 and 35. Without actual calculation choose the mean of the data.

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5. Find the modes of the following data.

5, 7, 4, 5, 6, 2, 5, 2, 4, 7, 5

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6. Find the modes of the following data.

26, 15, 19, 16, 18, 17, 20, 14, 13, 25

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7. Find the modes of the following data.

10, 16, 10, 16, 20, 10, 16, 20, 10

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8. One situation where mean would be an appropriate representative value.

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12. What is the average number of glasses of water that you drink per day in a week? How did you find the average?

13. A data of 10 observations has a minimum value 15 and maximum value 25. What is the mean of the data?

A. 12

B. 15

C. 21

D. 27

Answer:

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14. Observations of a data are 23, 45, 33, 21, 48, 30, 34, 36 and 35. Without actual calculation choose the mean of the data.

A. 20

B. 35

C. 48

D. 50

Answer:

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15. Find the modes of the following data. 5, 6, 3, 5, 4, 9, 5, 6, 4, 9, 5

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16. Find the modes of the following data.

25, 14, 18, 15, 17, 16, 19, 13, 12, 24

17. Find the modes of the following data. 10, 15, 20, 15, 20, 10, 15, 20, 10

18. One situation where mean would be an appropriate representative value.

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19. One situation where mode would be an appropriate representative value.

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Do This

1. In a unit test Amar secured 20, 18, 23, 21, 24 and 22 marks in Telugu, Hindi, English, Mathematics, Science and Social Science respectively. Peter got 23, 21, 20, 19, 24 and 17 marks in the above subjects respectively. Interpret the data in an organized manner.

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Exercise 1

1. Maximum day time temperatures of Hyderabad in a week (from 26th February to 4th March, 2011) are recorded as $26°C, 27°C, 30°C, 30°C, 32°C, 33°C$ and

$32°C$: What is the maximum temperature of the week?

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2. Maximum day time temperatures of Hyderabad in a week (from 26th February to 4th March, 2011) are recorded as $26°C, 27°C, 30°C, 30°C, 32°C, 33°C$ and $32°C$: What is the average temperature of the week?

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4. In a village three different crops are cultivated in four successive years. The profit (in rupees) on the crops, per acre is shown in the table below-

Crop \ year	2005	2006	2007	2008
Ground nuts	7000	8000	7500	7500
Jawar	6000	1000	8000	1000
Millets	9000	5000	3000	4000

(i) Calculate the mean profit for each crop over the 4 years.

(ii) Based on your answers, which crop should be cultivated in the next year?

5. The number of passengers who travelled in APSRTC bus from Adilabad to Nirmal in 4 trips in a day are 39, 30, 45 and 54. What is the occupancy ratio (average number of passengers travelling per trip) of the bus for

the day?

6. The following table shows the marks scored by Anju, Neelesh and Lekhya in four unit tests of English.

Name of the Student	Unit Test I	Unit Test II	Unit Test III	Unit Test IV
Anju	Absent	19	23	21
Neelesh	0	20	22	24
Lekhya	20	24	24	24

(i) Find the average marks obtained by Lekhya.

(ii)

Find the average marks secured by Anju. Will you divide the total marks by 3 or 4? Why?

(iii) Neelesh has given all four tests. Find the average marks secured by him. Will you divide the total marks by 3 or 4? Why?

(iv) Who performed best in the English?

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14. Three friends went to a hotel and had

breakfast to their taste, paying ₹16, ₹17 and

₹21 respectively i) Find their mean

expenditure. ii) If they have spent 3 times the

amount that they have already spent, what

would their mean expenditure be? iii) If the hotel manager offers 50% discount, what would their mean expenditure be? iv) Do you notice any relationship between the change in expenditure and the change n mean expenditure?

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15. Find the mean of the first ten natural numbers.

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16. Find the mean of the first five prime numbers.

17. In a set of four integers, the average of the two smallest integers is 102, the average of the three smallest integers is 103, the average of all four is 104. Which is the greatest of these integers?

18. Write at least two questions to find the mean, giving suitable data.

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Exercise 2

1. Long jumps by 7 students of a team are 98cm, l25cm, l40cm, 155cm, l74cm, l40cm and l55cm. Find the mode of the data.

2. Ages of players in a cricket team are 25, 26, 25, 27, 28, 30, 31, 27, 33, 27, 29. (i) Find the mean and mode of the data.(ii) Find the minimum number of players to be added to the above team so that mode of the data changes and what must be their ages.

3. Find the mode of the following data 12, 24, 36, 46, 25, 38, 72, 36, 25, 38, 12, 24, 46, 25,12,24 ,46, 25, 72, 12, 24, 36, 25, 38 and 36.

4. Decide whether mean or mode is a better representative value in the following situations.

A shop keeper, who sells tooth paste tubes of different sizes, wants to decide which size is to be ordered more.

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5. Decide whether mean or mode is a better representative value in the following

situations.

An invigilator wants to bring sufficient number

of additional papers to the examination hall

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6. Decide whether mean or mode is a better

representative value in the following

situations.

Preparation of the number of laddus for a marriage.

7. Decide whether mean or mode is a better representative value in the following situations.

For finding the favorite cricketer in a class.

8. Long jumps by 7 students of a team are 98cm, l25cm, l40cm, 155cm, l74cm, l40cm and l55cm. Find the mode of the data.

9. Ages of players in a cricket team are 25, 26, 25, 27, 28, 30, 31, 27, 33, 27, 29.

Find mode of the data.

10. Ages of players in a cricket team are 25, 26, 25, 27, 28, 30, 31, 27, 33, 27, 29.

Find the minimum number of players to be

added to the above team so that mode of the data changes and what must be their ages

11. Find the mode of the following data 12, 24, 36, 46, 25, 38, 72, 36, 25, 38, 12, 24, 46, 25,12,24 ,46, 25, 72, 12, 24, 36, 25, 38 and 36.

Exercise 3

1. Say true or false and why? The difference between the largest and smallest observations in a data set is called the mean.

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2. Say True or False and why ? In a bar graph, the bar which has greater length may contains mode.

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3. Say true or false and why? Value of every observation in the data set is taken into account when median is calculated.

4. Say true or false and why? The median of a set of numbers is always one of the numbers.

5. The monthly income (in rupees) of 7 households in a village are 1200, 1500, 1400, 1000, 1000, 1600, 10000. (i) Find the median income of the house holds. (ii) If one more household with monthly income of `1500 is added, what will the median income be?

6. Observations of a data are 16, 72, 0, 55, 65,55, 10 and 41. Chaitanya calculated the mode and

median without taking the zero into consideration. Did Chaitanya do the right thing?

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7. How many distinct sets of three positive integers have a mean of 6, a median of 7, and no mode?

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8. Four integers are added to a group of Integers 3, 4, 5, 5 and 8 and the mean, median and mode of the data increases by 1 each. What is the greatest integer in the new group of integers?

9. Say true or false and why? The difference between the largest and smallest observations in a data set is called the mean.

10. Say true or false and why? In a bar graph, the bar which has the greater length indicates mode.

11. Say true or false and why? Value of every observation in the data set is taken into account when median is calculated.

12. Say true or false and why? The median of a set of numbers is always one of the numbers.

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13. The monthly income (in rupees) of 7 households in a village are 1200, 1500, 1400, 1000, 1000,1600, 10000.Find the median income of the households.

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14. The monthly income (in rupees) of 7 households in a village are 1200, 1500, 1400, 1000, 1000,1600, 10000. If one more household with monthly income of Rs. 1500 is added, what will the median income be?

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15. Observations of a data are 16, 72, 0, 55, 65,55, 10 and 41. Chaitanya calculated the mode and median without taking the zero into

consideration. Did Chaitanya do the right thing?

16. How many distinct sets of three positive integers have a mean of 6, a median of 7, and no mode?

17. Four integers are added to a group of Integers 3, 4, 5, 5 and 8 and the mean, median and mode of the data increases by 1 each. What is the greatest integer in the new group of integers?

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Exercise 4

1. Draw a bar graph for the following data.

Population of India in successive census years-

Year	1941	1951	1961	1971	1981	1991	2001
Population (in millions) (approx)	320	360	440	550	680	850	1000

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2. Draw a pie chart for the following data.

Item of expenditure	Food	Health	Clothing	Education	Savings
Amount spent in rupees	3750	1875	1875	1200	7500

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3. Draw a double bar graph for the following data. Birth and Death rates of different states in 1999.

State	Birth Rate (Per 1000)	Death Rate (Per 1000)
Andhra Pradesh	22	8
Karnataka	22	8
Tamil Nadu	19	8
Kerala	18	6
Maharashtra	21	8
Orissa	24	11

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4. Draw a pie chart for the following data. Time spent by a child during a day-

Time spent for	Sleep	School	Play	Others
Time spent	8 hrs	6hrs	2hrs	8 hrs

5. The adjoining pie chart gives the expenditure on various items during a month for a family. (The numbers written around the pie chart tell us the angles made by each sector at the centre.)
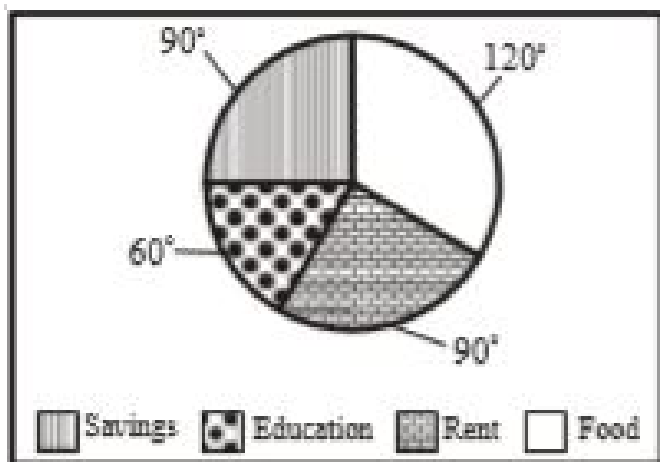
Answer the following-

90°

120°

60°

90°

Savings   Education   Rent   Food
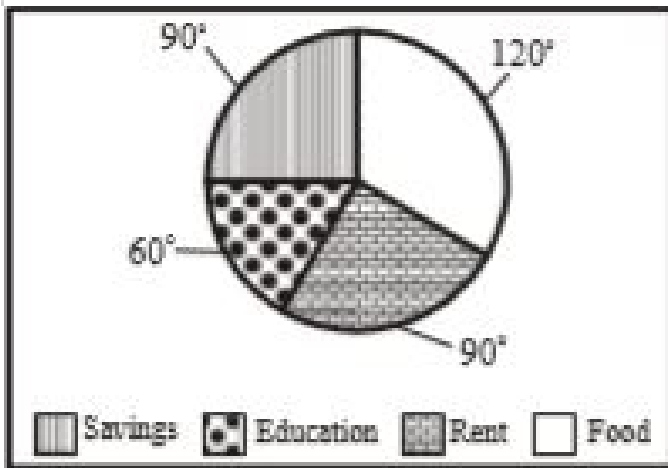
On which item is the expenditure minimum?

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6. The adjoining pie chart gives the expenditure on various items during a month for a family. (The numbers written around the

pie chart tell us the angles made by each sector at the centre.)

Answer the following-

On which item is the expenditure maximum?

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7. The adjoining pie chart gives the expenditure on various items during a month for a family. (The numbers written around the pie chart tell us the angles made by each sector at the centre.)
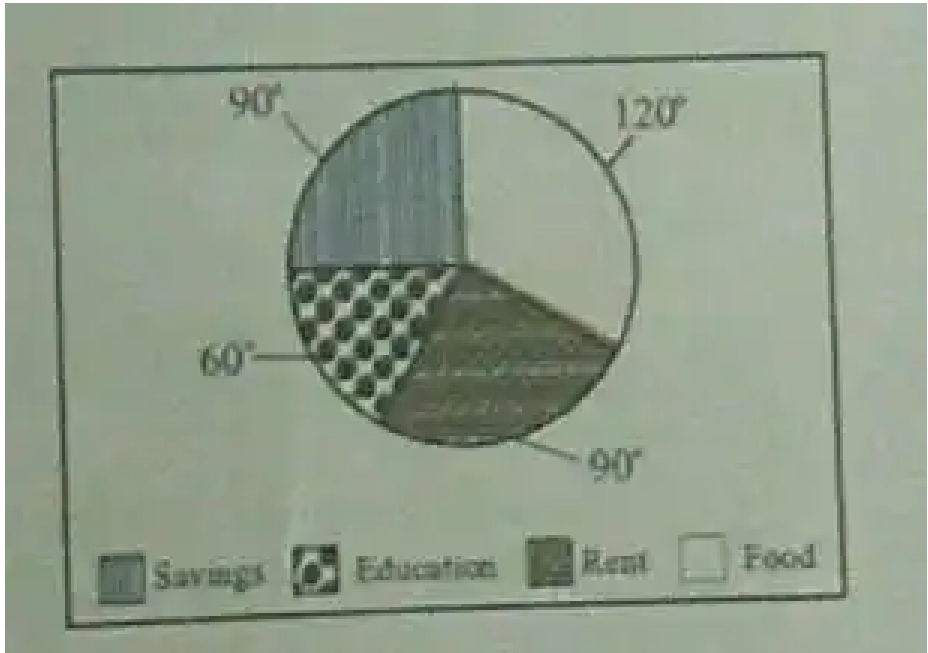
Answer the following-
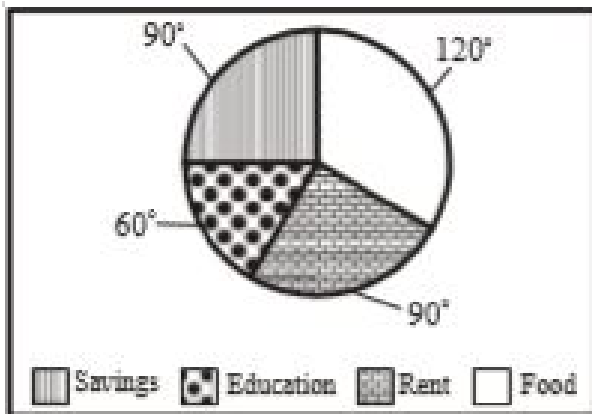
If the monthly income of the family is Rs 9000, what is the expenditure on rent?

8. The adjoining pie chart gives the expenditure on various Items during a month for a family. (The numbers written around the pie chart tell as the angles made by each sector at the centre). Answer the following : If the expenditure on food is Rs. 3000 ? What is

the expenditure on education of children?