



# MATHS

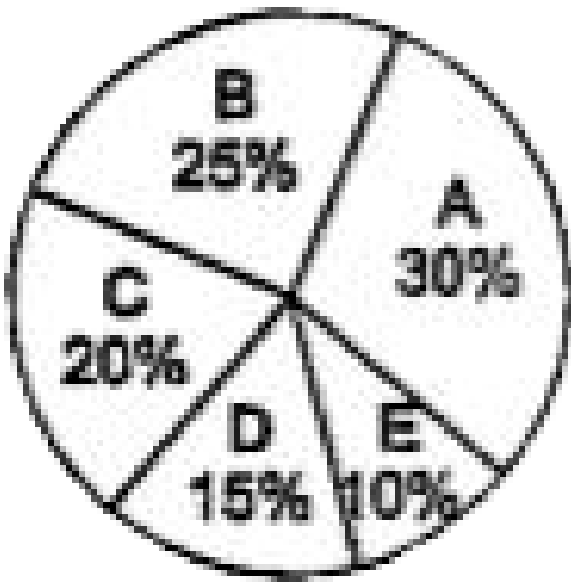
## BOOKS - ARIHANT PUBLICATION

### BIHAR

## STATISTICS

### Solved Examples

1. The following diagram show the expenditure of a family on various Items A ,B,C, D and E .



Study the diagram carefully and answer the following questions .

The angle of pie diagram showing the expenditure incurred on item A is

A.  $30^\circ$

B.  $35^\circ$

C.  $108^\circ$

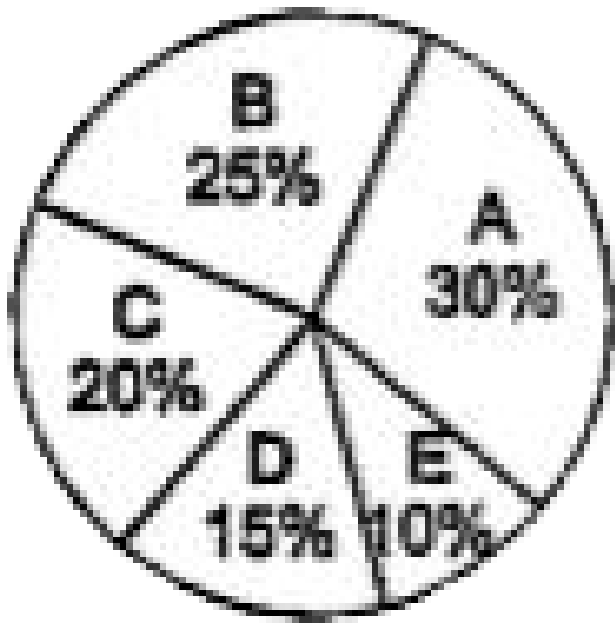
D. None of these

**Answer: C**



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2. The following diagram show the expenditure of a family on various Items A ,B,C, D and E .



Study the diagram carefully and answer the following questions .

Which two expenditure together will form an angle of  $90^\circ$  at the centre of pie diagram ?

A. D and E

B. A and D

C. A and E

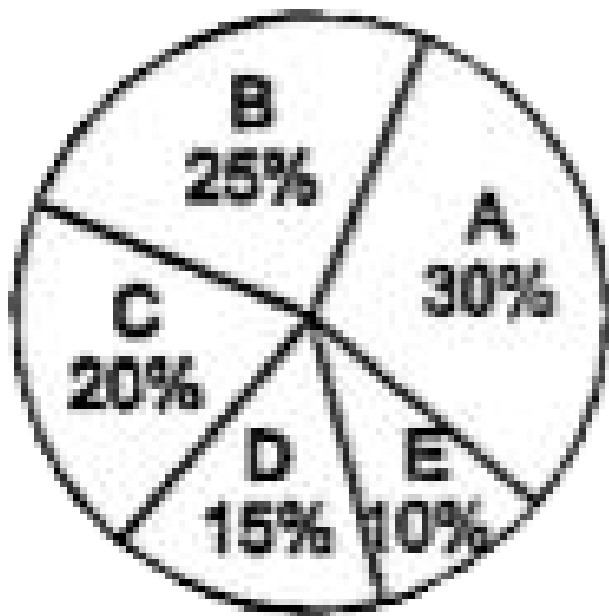
D. D and C

**Answer: A**



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**3.** The following diagram show the expenditure of a family on various Items A ,B,C, D and E .



Study the diagram carefully and answer the following questions .

If the income of the family is Rs 3000 per month then expenditure on item C will be

A. Rs 400

B. Rs 500

C. Rs 600

D. Rs 800

**Answer: C**



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**4.** If the arithmetic mean of 9, 11, 4, 7,  $p$  and 6 is 7, then the value of  $p$

A. 10

B. 5

C. 15

D. 20

**Answer: B**



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5. The mean of the following data is

Class interval	25-35	35-45	45-55	55-65	65-75
Frequency	6	10	8	12	4

A. 49.5

B. 50.5



C. 51.5

D. None of these

**Answer: A**



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6. The mean of the following distribution is

$x$	4	7	10	13	16	19	22
$f$	23	25	27	29	27	25	23

A. 10

B. 13

C. 12

D. 15

**Answer: B**



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7. The median of the following data is 25, 31, 22, 26, 35, 29, 20, 32

A. 27.5

B. 29.5

C. 22.5

D. None of these

**Answer: A**



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**8.** The median of the frequency distribution is

Marks obtained	Number of students	Cumulative frequency
15-20	6	6
20-25	7	13
25-30	9	22
30-35	8	30
35-40	10	40

A. 28.88

B. 30.88

C. 35.88

D. None of these

**Answer: A**



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**9.** The sum of deviations of a set of values  $x_1, x_2, \dots, x_n$  measured from 20 is 8 and the

sum of deviations of the value from 18 is 52.

The value of  $n$  and the mean is

A. 22,20.36

B. 25, 49.5

C. 30,50.5

D. 35,50.6

**Answer: A**



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10. The mean deviation from the mean for the following data is

<b>Class interval</b>	<b>Frequency</b>
10-20	2
20-30	3
30-40	8
40-50	14
50-60	8
60-70	3
70-80	2

- A. 5
- B. 10
- C. 15

D. 20

**Answer: B**



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**Exam Booster For Cracking Exam**

1. The most stable measure of central tendency is

A. median

B. mean

C. mode

D. None of these

**Answer: B**



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2. The measure which takes into account all the data items is

A. mean



B. frequency

C. mode

D. median

**Answer: A**



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**3.** Frequency polygon can be drawn after drawing

A. ogive

B. bar chart

C. histogram

D. None of these

**Answer: C**



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**4. Pie chart is drawn with the help of**

A. radius of the circle

B. chords of the circle

C. sectors of the circle

D. diameter of the circle

**Answer: C**



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5. The total expenditure incurred by an industry under different heads is best presented as a

A. pie diagram

B. histogram

C. frequency polygon

D. bar graph

**Answer: A**



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**6.** The mid value of a class interval is 40. If the class size is 10, then the upper and lower limits of the class are

A. 37.5 and 47.5

B. 45 and 35

C. 37 and 47

D. 47.5 and 37.5

**Answer: B**



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7. If the mean of five observations  $x$ ,  $(x + 1)$ ,  $(x + 2)$ ,  $(x + 5)$  and  $(x + 7)$  is 11, then the mean of first three observations is

A. 9

B. 11

C. 13

D. None of these

**Answer: A**



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**8.** The standard deviation for the data 7, 11, 15  
is

A. 2.4

B. 2.5

C. 2.7

D. 3.26

**Answer: D**



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9. Consider the table given below

<b>Marks</b>	<b>Number of students</b>
0-10	12
10-20	18
20-30	27
30-40	20
40-50	17
50-60	6

The arithmetic mean of the marks given above  
is

A. 6

B. 18

C. 28



D. 27

**Answer: C**



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**10.** The mean deviation of the following distribution is

$x$	10	11	12	13	14
$f$	3	12	18	12	3

A. 11,5

B. 0.75

C. 1.25

D. 26

**Answer: B**



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**11.** In a class of 40 students, 10 have failed and their average marks are 30. The total marks obtained by the entire class are 3000. The average marks of those who have passed is

A. 280

B. 2520

C. 90

D. None of these

**Answer: C**



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**12.** If the mean of the following data is 13.5, then the value of  $p$  is

$x$	5	10	$p$	20	25
$f$	10	10	10	2	8

A. 15

B. 150

C. 10

D. None of these

**Answer: A**



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13. The mean of the values of 1, 2, 3, ... x with respective frequencies y, 2y, 3y, ..., xy is

A.  $(2x+1)$

B.  $x(x+1)(2x+1)$

C.  $\frac{2x + 1}{3}$

D. None of these

**Answer: C**



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14. A distribution consists of three components with frequencies 45, 40 and 15 having their means 2, 2.5 and 2, respectively. The mean of the combined distribution is

A. 220

B. 2.2

C. 100

D. 45

**Answer: B**



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15. The value of median from the following data is

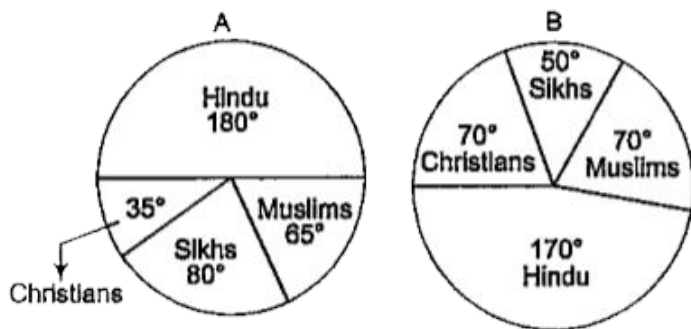
$x$	100	150	80	200	250	180
$f$	24	26	16	20	6	30

- A. 153
- B. 150
- C. 180
- D. None of these

**Answer: B**



**16.** Read the following pie diagrams carefully and answer the questions that follow .  
Following two pie diagrams show the religion were distribution of workers in two states.



The percentage of Hindus in state A is

A. 50 %



B. 30 %

C. 160 %

D. None of these

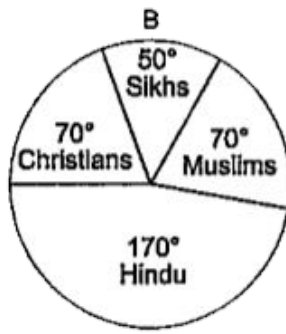
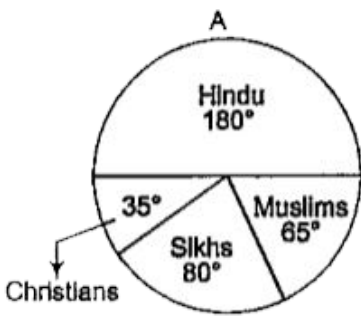
**Answer: A**



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**17.** Read the following pie diagrams carefully and answer the questions that follow .

Following two pie diagrams show the religion were distribution of workers in two states.



The percentage of Muslims in state B is

A. 19 %

B. 70 %

C. 19.44 %

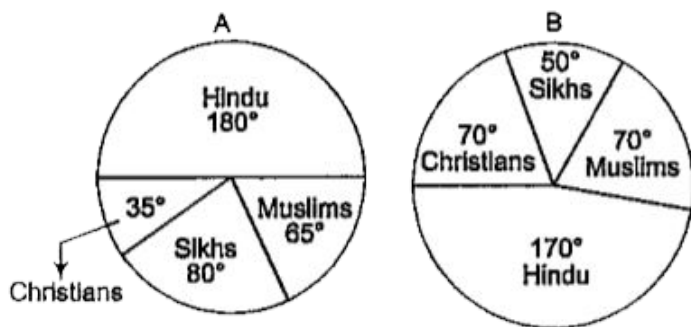
D. None of these

**Answer: C**



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**18.** Read the following pie diagrams carefully and answer the questions that follow .  
Following two pie diagrams show the religion were distribution of workers in two states.



The percentage difference between Sikh population in the two states is

A. 8 %

B. 8.33 %

C. 0.33 %

D. 80 %

**Answer: B**



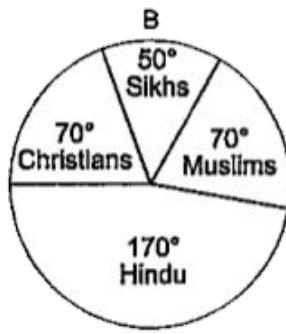
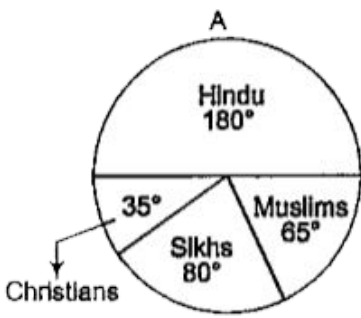
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**19.** Read the following pie diagrams carefully

and answer the questions that follow .

Following two pie diagrams show the religion

were distribution of workers in two states.



The percentage difference between Hindu population in state A and Muslims population in state B is

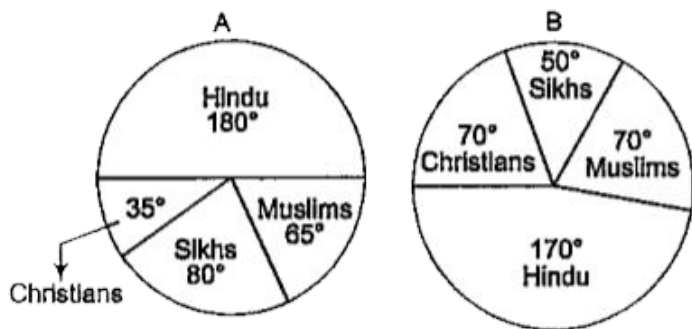
- A. 30.55 %
- B. 25.5 %
- C. 55 %
- D. 11 %

**Answer: A**



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**20.** Read the following pie diagrams carefully and answer the questions that follow .  
Following two pie diagrams show the religion were distribution of workers in two states.



The percentage difference between Christians population in state A and Sikha population in state B is

A. 4.17 %

B. 15 %

C. 30 %

D. 45 %

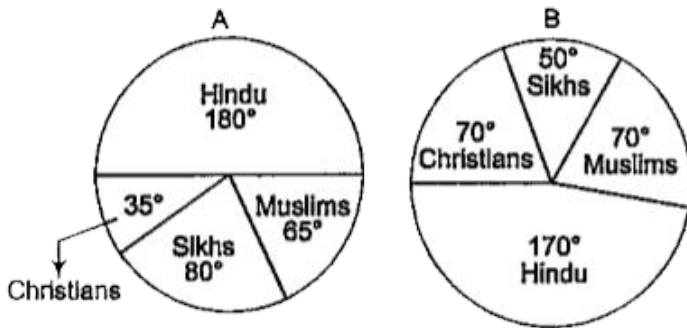
**Answer: A**



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21. Read the following pie diagrams carefully and answer the questions that follow .

Following two pie diagrams show the religion were distribution of workers in two states.



If the population of the state B is 540000, then the Muslims population is

A. 105000

B. 540000



C. 36000

D. 70000

**Answer: A**



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**22.** Average score of 30 students in a class is 34. Later on it was found that the score 13 was incorrectly recorded as 73. The correct average score is

A. 2150

B. 50

C. 32

D. None of these

**Answer: C**



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**23.** A candidate obtains the marks in subjects, English 40, Hindi 30, Mathematics 60, Physics 70 and Chemistry 40. In the weights of 1, 2, 2,

3, 3 respectively are allotted to the subjects,  
then in the candidates weighted mean is

A. 59

B. 615

C. 10

D. 50

**Answer: D**



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24. The mean of the squares of the numbers

1,2,3,4,  $\dots$  n is

A.  $\frac{1}{6}(n + 1)(2n + 1)$

B.  $\frac{1}{6}(n + 1)$

C.  $\frac{1}{6}(2n + 1)$

D. None of these

**Answer: A**



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25. If the variance of a data is 289, then the standard deviation is

A. 17

B. 12

C. 121

D.  $\sqrt{11}$

**Answer: A**



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