What percent of total spending was on chole bhature?
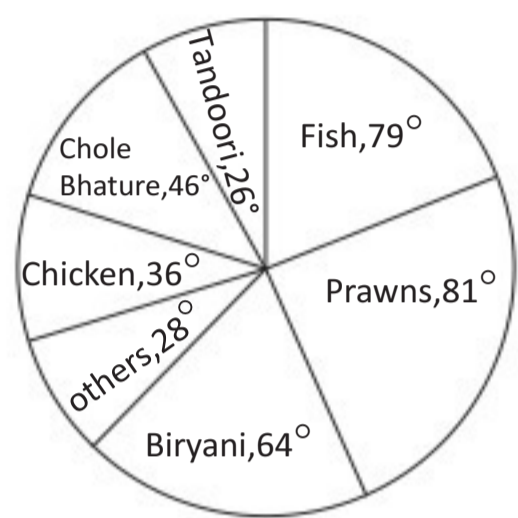
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MODEL QUESTIONS

Directions (Q.No.1-5) : Study the following graph carefully and answer the questions below.

The given pie-chart shows the distribution of spending on different food items.

Pie chart: Tandoori,26°; Fish,79°; Chole Bhature,46°; Chicken,36°; Prawns,81°; others,28°; Biryani,64°

1. What percent of total spending was on chole bhature?
   a) 12.78%   b) 10%
   c) 13.9%   d) 11.95%
   e) 14.23%

2. The amount spent on prawns is how much percent more than that on Biryani?
   a) 29.50%   b) 26.56%
   c) 28.65%   d) 35.79%
   e) 36.15%

3. If the total amount spent on food items is Rs. 500000, then the amount spent on fish exceeds that on Biryani by: (approx)
   a) Rs. 21622   b) Rs. 19622
   c) Rs. 15632   d) Rs. 20833
   e) Rs. 22623

4. The spendings on others is how much percent less than that on Chicken?
   a) 18.89   b) 22.22
   c) 24.65   d) 19.44
   e) 23.29

5. If the total amount spent on food be Rs. 720000. Then find the average amount spent on Biryani, others and Chicken? (approx)
   a) 82362   b) 85333
   c) 85362   d) 86334
   e) 89456

6. M and N can do a work in 10 days and 15 days respectively. If M starts on the work and both work alternately day after day. In how many days will the work be completed?
   a) 10   b) 12   c) 8

   d) 9   e) None of these

7. The minimum temperature from Monday to Wednesday is 28°C and from Thursday to Sunday, it is 35°C. What is the average minimum temperature for the week?
   a) 32°C   b) 31.5°C
   c) 30°C   d) 32.5°C
   e) 30.5°C

8. A sum was put at simple interest at a certain rate for 3 years. Had it been put at 3% higher rate, it would have fetched Rs. 27 more. The sum is?
   a) Rs. 400   b) Rs. 250
   c) Rs. 300   d) Rs. 500
   e) None of these

9. A mixture of milk and water contain 10% water. Determine the amount of water to be added to the mixture in order to change the water content to 20% if initially, the mixture is of 40 L?
   a) 6L   b) 6.5L   c) 5.5L
   d) 5L   e) 4L

10. If the shopkeeper keeps the marked priceof an article to Rs. 2500 and says to give two successive discounts of 15% and 20% and still manages to earn a profit of 10%, find the cost price of the article?
    a) Rs. 1525.45   b) Rs. 1545.45
    c) Rs. 1595.65   d) Rs. 1625.45
    e) Rs. 1725.45

Directions (Q.No. 11-15) :There are 3 school buses: Bus A, Bus B and Bus C. The ratio of boys and girls in Bus A is 3.2. 25% of all girls are in Bus B and the number of girls in Bus C is 16 more than in Bus B. The ratio of the number of boys in buses B and C is 5:8. There are 220 students in total and the number of students in Buses A and B are equal. There are 100 students in Bus C.

11. What is the overall ratio of the number of boys to girls in all 3 buses?
    a) 7 : 3   b) 7 : 4
    c) 8 : 3   d) 8 : 5   e) 9 : 7

12. What percentage of all girls are in Bus C?
    a) 40%   b) 35%
    c) 50%   d) 45%   e) 55%

13. The sum of the number of girls in Buses A and C is what percent of the sum of the number of boys in the same 2 buses?
    a) 60%   b) 80%
    c) 75%   d) 48%   e) 64%

14. In Bus B, 15% of the boys and 20% of the girls got out in Kormangala and 8 boys and some girls got out in silk board such that the ratio of boys to girls on bus became 2 : 1. How many girls got out in silk board?
    a) 1   b) 2   c) 3
    d) 4   e) 5

15. What is the ratio of the difference between the number of boys and girls in Bus A to the difference between the total number of students in buses B and C?
    a) 7 : 10   b) 3 : 10
    c) 4 : 7   d) 6 : 11
    e) 5 : 13

Solutions

1. **a;** Centre angle of total expense = 360°
   Centre angle for the expense on chole bhature = 46°
   Percentage of money spent on chole bhature
   $= \dfrac{46}{360} \times 100 = 12.78\%$

2. **b;** Let the total expenditure on all the different food items be Rs. X
   Amount spent on Biryani
   $= \dfrac{64}{360} \times x = \dfrac{8x}{45}$
   Amount spent on prawn
   $= \dfrac{81}{360} \times x = \dfrac{9x}{40}$
   Required percentage
   $= \dfrac{\left(\dfrac{9x}{40}\right) - \left(\dfrac{8x}{45}\right)}{\dfrac{8x}{45}} \times 100 = \dfrac{17}{64} \times 100$
   $= 26.56\%$

3. **d;** Central angle for expense on biryani = 64°
   Centre angle for expense on Fish = 79°
   Total expense = Rs. 500000
   The amount spent on fish exceeds on Biryani by a central angle of (79 − 64) =15°
   Exceeding amount
   $= \dfrac{79° - 64}{360} \times 500000$
   $= 20833.33 \approx 20833$

4. **b;** Let the total spending on foods be Rs. X
   Amount spent on chicken

   $= \dfrac{36}{360} \quad x = \dfrac{x}{10}$
   Amount spent on others
   $= \dfrac{28}{360} \quad x = \dfrac{7x}{90}$
   ∴ Required percentage
   $= \dfrac{\left(\dfrac{x}{10}\right) - \left(\dfrac{7x}{90}\right)}{\dfrac{x}{10}} \times 100 = 22.22$

5. **b;** Given that, total amount spent on food = 720000
   Amount spent on Biryani
   $= \dfrac{64}{360} \times 720000 = 128000$
   Amount spent on others
   $= \dfrac{28}{360} \times 720000 = 56000$
   Amount spent on Chicken
   $= \dfrac{36}{360} \times 720000 = 72000$
   Required average amount
   $= \dfrac{(12800 + 56000 + 72000)}{3}$
   $= 85333.3 \approx 85333$

6. **b;** Work done in 1st two days
   $= \dfrac{1}{10} + \dfrac{1}{15} = \dfrac{3+2}{30} = \dfrac{1}{6}$
   ∴ Number of days = 12

7. **a;** Minimum temperature from Monday to Wednesday is 28°C
   ∴ Minimum temperature for 3 days is 28°C
   Minimum temperature from Thursday to Sunday is 35°C
   ∴ Minimum temperature for 4 days is 35°C
   Now, Sum of minimum temperature for the week
   $= (3 \times 28) + (4 \times 35)$
   ∴ Sum of minimum

   temperatures = 224
   We know that, Average = Sum of all observations / Number of observations
   ∴ Average minimum temperature = Sum of minimum temperatures/No. of days
   = Average minimum temperature = 224/7
   = Average minimum temperature = 32°C

8. **c;** Formula for simple interest.
   $SI = \dfrac{P \ R \ T}{100}$
   Where, P =Principal
   R = Rate of interest
   T = Time period
   Let the sum be Rs. X and the original rate be R%
   Then $SI = \dfrac{x \ R \ 3}{100}$
   Where rate is increased by 3%
   Then R = R + 3
   and $SI = \dfrac{X \ (R+3) \ 3}{100}$
   According to the question, the difference between the two equations is Rs. 27
   ∴ $\dfrac{X \ (R+3) \ 3}{100} - \dfrac{X \ R \ 3}{100} = 27$
   $\Rightarrow \dfrac{3XR + 9X - 3XR}{100} = 27$
   $\Rightarrow \dfrac{9X}{100} = 27 \Rightarrow 9X = 2700$
   $\Rightarrow X = \dfrac{2700}{9} \Rightarrow X = 300$

9. **d;** Amount of mixture = 40L
   Amount of water initially
   $= \left(\dfrac{10}{100}\right) \ 40 = 4L$
   Let 'x' be the amount of water

   to be added
   $\Rightarrow \left[\dfrac{(4+x)}{40+x}\right] \ 100 = 20$
   $\Rightarrow$ 40 +10x = 80 +2x
   $\Rightarrow$ 8x = 40
   $\Rightarrow x = \dfrac{40}{8} = 5$
   ∴ 5L of water is to be added to the mixture

10. **b;** Let the cost price be x
    Marked price of article = Rs. 2500
    Price after first discount
    $= \left(\dfrac{85}{100}\right) \ 2500 = Rs.2125$
    Price paid by purchaser
    $= \left(\dfrac{80}{100}\right) \ 2125 = Rs.1700$
    Profit = 10%
    $\Rightarrow x + \left(\dfrac{10}{100}\right) \ x = 1700$
    $\Rightarrow$ x = Rs.1545.45
    ∴ Cost price = Rs.1545.45

11. **b;** Sum of the number of students in Buses A and B = 220 − 100 = 120
    Number of students in each of Bus A or Bus B
    $= \dfrac{120}{2} = 60$
    Number of boys in Bus A
    $= \left(\dfrac{3}{5}\right) * 60 = 36$
    Number of girls in Bus A = 60 − 36 = 24
    Let the total number of girls be 'g'
    So, Number of girls in Bus B $= \dfrac{25g}{100} = \dfrac{3}{4}$
    Number of girls in Bus

    $C = \dfrac{3}{4} + 16$ So, $24 + \dfrac{3}{4} + \dfrac{g}{4} + 16 = 9$
    $\Rightarrow \dfrac{g}{2} = 40 \Rightarrow g = 80$
    Total number of boys = 220 − 80 = 140
    Sum of the number of boys in Buses A and B = 140 − 36 = 104
    So, $24 + \dfrac{g}{4} + \dfrac{g}{4} + 16 = 9 \Rightarrow \dfrac{g}{2} = 40$
    $\Rightarrow$ g = 80

	Boys	Girls	Total
Bus A	36	24	60
Bus B	40	20	60
Bus C	64	36	100
Total	140	80	220

    Total no. of boys = 140
    Total no. of girls = 80
    Required ration =140 :80= 7 : 4

12. **d;** Required percentage
    $= \dfrac{36}{80} \times 100 = 45\%$

13. **a;** Number of girls in A and C= 60
    No. of boys in A and C = 100
    Required percentage = 60%

14. **c;** Number of boys in Bus B after Koramangala
    $= \left(\dfrac{85}{100}\right) \ 40 = 34$
    Number of girls in Bus B after Koramangla
    $= \left(\dfrac{80}{100}\right) \ 20 = 16$
    Number of boys after Silk board in Bus B = 34 − 8 = 26
    Number of girls after Silk board in Bus B = 26/2 = 13
    Number of girls who got out in Silk board = 16 − 13 = 3

15. **b;** Required ratio
    $= (36 − 24) : (100 − 60) = 3 : 10$