Percentage

Solution

Answer:(1):

Let student in Class – II be 2x.

So, student in Class – IV = $\frac{150}{100} \times 2x$

$= 3x$

Student in class – III = $(10 + 2x)$

Student in class – V = $\frac{80}{100} \times 3x$

$= 2.4x$

Student in class – I = $2.4x \times \frac{15}{16}$

$= 2.25x$

ATQ,

$2.25x = 2x = (10 + 2x) + 3x + 2.4x = 243$

$11.65x = 233$

$x = 20$

Class	Total student
I	**45**
II	**40**
III	**50**
IV	**60**
V	48

1. Answer: (D)

Total students in Class – VI = $\frac{150}{100} \times \left(\frac{40 + 48}{2}\right)$

$= 66$

Required difference = $66 - 60$

$= 6$

2. Answer: (D)

Number of invalid votes = 30% of 2700

= 810.

Thus valid vote = (2700 -810) = 1890

Valid votes polled by People's Party = 40% of 1890 = 756.

3. Answer: (A)

Each student gets sweets which is equal to the value of 25% of the total number of students.

This can be calculated as (25/100) × 80 = 20 sweets

Similarly, each teacher gets (30/100) × 80 = 24 sweets

Total number of sweets = number of students × sweets per student + number of teachers × sweets per teacher = 80 × 20 + 4 × 24 = 1696

4. Answer: (B)

Ramola = Ravina × 3

Ravina = Ruchira × (115/100)

= 32000 × (115/100)

= Rs. 36800

∴ Ramola's annual income = 36800 × 3 × 12

= Rs. 13,24,800

Hence, option 2 is correct.

5. Answer: (D)

Let in initial price of the ticket be Rs. a and the initial number of viewers be b.

Total revenue = ab

Now the price is changed to 1.25a and the number of viewers are changed to 0.8 b.

Total revenue = 1.25a × 0.8b = ab

This means whatever ne the price and number of viewers, 25% increase in price and 20% decrease in viewers will not change the profit.

Hence, data is insufficient.

6. Answer: (C)

Price of the flat = Rs.5,15,000

Flat was insured to 80% of its price

Insured price = 515000 × 80/100

Insurance company paid 90% of the insurance.

Amount paid by insurance company

= 515000 × 80/100 × 90/100 = 370800.

Difference between the price of the flat and the amount received

= Rs. (5,15,000 - 370800) = Rs. 144200

Answer: (7 – 11):

The correct answer is Option 1 i.e. 2 : 1

Suppose Total students in schools A and B are 'a' and 'b' respectively.

Students in Commerce stream in school A = a/3
Students in Science stream in school B = 100/6 × 1/100 × b = b/6
Since Sum of total students in Commerce stream in A and Science stream in B is 500:
a/3 + b/6 = 500
2a + b = 3000 ..... (1) Since there are total 2100 students in two schools A and B:
a + b = 2100 ..... (2) From equation 1 and 2:
a = 900 & b = 1200
So,
Students in Commerce stream in school A = a/3 = 300
Students in Science stream in school B = b/6 = 400
40% of total students in school B are in Commerce stream and 40% of total students in school A are in Art stream.
So,
Students in Commerce stream in school B = 1200 × 0.4 = 480
Students in Science stream in school A = 900 × 0.4 = 360
Now,
Students in Art stream in school A = 900 – 300 – 360 = 240
Students in Art stream in school B = 1200 – 480 – 200 = 520
Hence, we can prepare the following table:

Streams	A	B
Art	360	520
Commerce	300	480
Science	240	200

7. Answer:(C)

8. Answer: (C):
Hence, average number of students in Arts stream in school A and B = (360 + 520)/2 = 440

9. Answer: (D):
Total students in Art stream in school B = 520
Total students in Science stream in school A = 240
Hence,
Required percent = [(520 – 240)/240] × 100 = 116.67%

10. Answer: (E):
School A:
Total students in Art stream = 360
Number of boys = 360 × 5/8 = 225
Number of girls = 360 × 3/8 = 135
School B:
Total students in Art stream = 520
Number of boys = 520 × 7/13 = 280
Number of girls = 520 × 6/13 = 240
Now,
Number of boys in Art stream of schools A and B together = 225 + 280 = 505
Number of girls in Art stream of schools A and B together = 135 + 240 = 375
Hence,
Required difference = 505 – 375 = 130

11. Answer: (B):
Since students in Science stream of school C are 25% more than total students in Commerce stream in school B;
Students in Science stream of school C = 1.25 × 480 = 600
Given: In school C total students are 1050.
Hence,
Total students of Art & Commerce stream in school C = 1050 – 600 = 450
Total students in Art and Commerce stream in school A = 360 + 300 = 660
Hence,
Required percentage = [(660 – 450)/660] × 100 = 31.8%

12. Answer: (C):
The correct answer is Option 3 i.e. 36 : 61
From the table:
Number of employees with less than 5 years of experience in company A = 240 – 96 = 144
Total number of employees with 5 + years of experience in B & C together = 84 + 160 = 244
Hence, ratio = 144 : 244 = 36 : 61

13. Answer: (D):

The correct answer is Option 4 i.e. 99.4%
From the table:
Total number of employees with less than 5 years of experience in companies C and D together
= (320 – 160) + (360 – 162) = 160 + 198
= 358
Total employees in company D = 360
Hence,
Required percentage = 358/360 × 100
= 99.4%

14. Answer: (A):
The correct answer is Option 1 i.e. 186
From the table:
Total number of employees with less than 5 years of experience in company A = 240 – 96 = 144
Given: Number of males with less than 5 years of experience in company A is 70
So,
Total number of females with less than 5 years of experience in company A = 144 – 70 = 74
And
Total number of employees with 5 + years of experience in company C = 160
Given: Number of males with 5 + years of experience in company C is 48
So,
Total number of females with 5 + years of experience in company C = 160 – 48 = 112
Hence, sum = 74 + 112 = 186

15. Answer: (E):
The correct answer is Option 5 i.e. 29
From the table:
Number of employees with less than 5 years of experience in company A = 240 – 96 = 144
Number of employees with less than 5 years of experience in company C = 320 – 160 = 160
Hence, Average = (144 + 160)/2 = 152
Number of employees with 5 + years of experience in company B = 84
Number of employees with 5 + years of experience in company D = 162
Hence, Average = (84 + 162)/2 = 123
Hence, difference = 152 – 123 = 29

16. Answer: (C):
The correct answer is Option 3 i.e. 122
From the table:
Number of employees with less than 5 years of experience in compnay D = 360 – 162 = 198
Number of females with less than 5 years of experience in company D is 98
So, number of males with less than 5 years of experience in company D = 198 – 98 = 100
Given: number of females with 5 + years of experience is 40% of number of males with less than 5 years of experience in company D.
So,
Number of females with 5 + years of experience in company D = 0.4 × 100 = 40
Hence, total number of male with 5 + years of experience in company D = 162 – 40 = 122

17. Answer: (B)
Illiterate Men = $\frac{4}{9} \times 4320 \times \frac{40}{100} = 768$
Literate Woman
= $\frac{5}{9} \times 4320 \times \frac{50}{100} = 1200$
∴ Required percentage
= $\frac{768}{1200} \times 100 = 64\%$

18. Answer: (A)
Let monthly salary = Rs. 100x
ATQ,
$100x \times \frac{90}{100} \times \frac{70}{100} = 63x$
Let total expense on Medical and groceries
= 3y + 4y = 7y
So, 7y = 63*x*
y = 9x
Given, 3y = 8100,
So, *y* = 2700
Now, *x* = 300
∴ monthly salary of the man

= 100x = Rs. 30,000

19. **Answer: (B)**

Marks obtained by D = 320

Marks obtained by C

$= 320 \times \frac{125}{100} = 400$

Marks obtained by B

$= 400 \times \frac{(100-10)}{100} = 360$

Marks obtained by A

$= 360 \times \frac{125}{100} = 450$

Hence, required marks obtained by A = 450

20. **Answer: (B)**

Let initial amount = 100

Now, total amount

$= 100 + 14 + \frac{45}{100} \times 114$

$= 165.3$

$\therefore 165.3 \rightarrow 16530$

$1 \rightarrow \frac{16530}{165.3}$

$\therefore 100 \rightarrow 100 \times 100 = 10{,}000\ Rs.$