Percentage Most Asked Common Questions (Last 5 years)

Q1. In a city, 68% of population is literate in which ratio of male to female is 11:6. And ratio of illiterate male to female is 3: 1 . Find the ratio of literate female to illiterate female in that city?
(a) 3:2
(b) 2:1
(c) 3:1
(d) 4:1
(e) 5:2

Q2. Value of B is 45 and A – B = 30. Find the value of 20% of A.
(a) 22
(b) 24
(c) 20
(d) 15
(e) 18

Q3. Neha gives 60% of her salary to her mother. From her share, her mother spends 40% on grocery and remaining 86400 Rs. she saved. find Neha's salary.
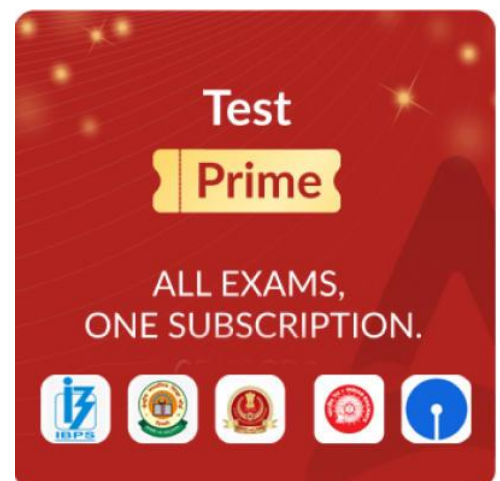(a) 240000
(b) 280000
(c) 250000
(d) 220000
(e) 244000

Q4. X's salary is 20% more than Y's salary and Z's salary $16\frac{2}{3}$% more than X's salary. 30% of Y's salary is what percent of the $28\frac{4}{7}$% of Z's salary.
(a) 75%
(b) 60%
(c) 30%
(d) 50%
(e) 40%

Q5. In a class percentage of students who passed the exam is 60% and number of boys & girls who passed the exam is same. If boys who failed the exam are 200% more than girls who failed in exam then find the percentage of girls who failed out of total students
(a) 9%
(b) 13%
(c) 10%
(d) 12%
(e) 15%

Q6. Sonali spent 25% of her monthly salary on house rent and 30% of her monthly salary on clothing. She gave 40% of her remaining monthly salary to her mother. If her remaining monthly salary is Rs.10800, then find her monthly salary?
(a) Rs.40000
(b) Rs.35000
(c) Rs.39000
(d) Rs.45000
(e) Rs.30000

Q7. In year 2016, ratio of boys to girls in a school is 36:19. And in year 2017, number of boys is increased by 1440 and number of girls is increased by 15%. If in 2017, there were total increase in the number of students is 1725 then find the increased number of boys in the school.
(a) 7240
(b) 5440
(c) 6040
(d) 4440
(e) 5040

Q8. The population of a village is decreased by 10% in the first year and then increased by 20% in the second year. Find the population of the village at the end of the second year if two years ago it was 15,000?
(a) 16180
(b) 16200
(c) 16320
(d) 16360
(e) 16480

Q9. A and B both spend 30% of their income together which is equal to Rs. 26400. If income of A is 20% more than that of B, then find the income of B (in Rs.)?
(a) 52000
(b) 48000
(c) 40000
(d) 36000
(e) 30000

Q10. If 45% of X is equal to 60% of Y and the average of both the numbers is 20 less than the X, then find 60% of Y?
(a) 108
(b) 64
(c) 72
(d) 96
(e) 80

Q11. The monthly income of Kisan is 40% more than Vimal and Vimal monthly income is 15% less than Uday. If total annual income of Vimal Rs. 345000, then find the monthly income of Kisan.
(a) $Rs. 40890$
(b) $Rs. 40740$
(c) $Rs. 40250$
(d) $Rs. 40550$
(e) $Rs. 40180$

Q12. 40% of 'x' is equal to 30% of 'y'. If average of x & y is 30 more than x, then find 75% of the 'y'?
(a) 180
(b) 150
(c) 240
(d) 210
(e) 360

Q13. In an election only two candidates participate. Candidate 'P' got 50% less votes than 'Q'. Had Q got 200 votes less there would have been a tie. What is the 8 times of the number of total votes polled?
(a) 800
(b) 7200
(c) 3200
(d) 9600
(e) 3600

Q14. The population a city after three years will be 21,600. If rate of increase of population per year be 20% then find the present population of the city?
(a) 12,500
(b) 16,500
(c) 14,500
(d) 10,500
(e) 11,600

Q15. There are 200 students in a class in which 64% are boys. If monthly fee of each boy is Rs. 250 and monthly fee of each girl is 20% less than that of each boy, then find total fee (in Rs.) paid by boys and girls?
(a) 46400
(b) 42400
(c) 48400
(d) 42500
(e) 41400

Q16. A student got 65% marks out of maximum marks which is 300 in the three different exams P, Q and R. If he got 55% marks in P, 65% marks in Q and the maximum marks of each subject is same, then find the marks in R.
(a) 78
(b) 72
(c) 75
(d) 80
(e) 82

Q17. For post A, total people applied are 50% more than total people applied for post B. Number of girls applied for both posts are same. If for post A, 70% boys applied, then find the percentage of girls applied for post B.
(a) 20%
(b) 30%
(c) 50%
(d) 45%
(e) 35%

Q18. Three friends P, Q ad R has Rs. X. Q has 20% more than the P and R has Rs. 1000 more than that of Q. If R has Rs. 7000, then find the value of X.
(a) Rs. 16000
(b) Rs. 12000
(c) Rs. 11000
(d) Rs. 15000
(e) Rs. 18000

Q19. If nominator of a fraction is increased by 60% and denomination is decreased by 20%, then the fraction becomes 5/6. Find the original fraction.
(a) 7/5
(b) 4/5
(c) 5/9
(d) 3/5
(e) 5/12

Q20. The difference of two positive numbers is 2. If 50% of bigger number is equal to 60% of smaller number, then find the bigger number?
(a) 12
(b) 10
(c) 9
(d) 14
(e) 16

Q21. In April 2019, a man has Rs 17500 and it is increased by 20% every year in the starting of April. If man spends 60% of total amount in April 2021, then find total amount (in Rs.) man has at the end of April 2021?
(a) 15120
(b) 10060
(c) 9080
(d) 10080
(e) 12080

Solutions

S1. Ans.(c)
Sol. Let the total population of that city be 100x
Then literate population= 68x
Literate male=$68x \times \frac{11}{17} = 44x$
Literate female=24x
Illiterate population= 32x
Illiterate female=$32x \times \frac{1}{4} = 8x$
Required ratio=$\frac{24x}{8x}$=3:1

S2. Ans.(d)
Sol. B = 45
A – B = 30
A – 45 = 30
A = 75
Now,
$Required\ value = \frac{20}{100} \times 75 = 15$

S3. Ans.(a)
Sol. Let Neha salary be $100x$
$\Rightarrow 100x \times \frac{60}{100} \times \frac{60}{100} = 86400$
$\Rightarrow 100x = 2,40,000$

S4. Ans.(a)
Sol. Let Y's salary = 5x
So X's salary = $\frac{5x \times 120}{100} = 6x$
And Z's salary = $\frac{6x \times 7}{6} = 7x$
Required percent = $\frac{\frac{30}{100} \times 5x}{\frac{28\frac{4}{7}}{100} \times 7x} \times 100$
= $\frac{1.5x}{2x} \times 100$ = 75%

S5. Ans.(c)
Sol. Let total students be 100x
Then passed students be 60x
Passed boys & girls are 30x each.
Let failed girls = y
Now,
y + 3y = 40x
4y = 40x
y = 10x
Required percentage = 10%

S6. Ans.(a)
Sol. Let Sonali's total monthly salary be Rs.100x

So, amount spent by Sonali on house rent = $100x \times \frac{25}{100}$= Rs.25x

So, amount spent by Sonali on clothing = $100x \times \frac{30}{100}$= Rs.30x

Amount given by Sonali to her mother = $\frac{40}{100} \times \left(100x - (25x + 30x)\right)$ = Rs.18x

ATQ,
$100x - (25x + 30x + 18x) = 10800$
$x = 400$
Hence, Sonali's monthly salary = 100×400= Rs.40000

S7. Ans.(e)
Sol. Let the number of students in the exam be 55x
Then number of boys= 36x
Number of girls=19x
ATQ
$55x + 1725 = (36x + 1440) + 19x \times 1.15$
$x = 100$
Increased number of boys=3600+1440=5040

S8. Ans.(b)
Sol. required population = 15000 × 0.9 × 1.2
= 16200

S9. Ans.(c)
Sol. Let total income of B = 100x Rs.

So, total income of A = $100x \times \left(1 + \frac{20}{100}\right) = 120x \ Rs.$

ATQ –
$(100x + 120x) \times \frac{30}{100} = 26400$
66x = 26400
x = 400 Rs.
So, income of B = $400 \times 100 = 40000 \ Rs.$

S10. Ans.(c)
Sol. ATQ -
$45 \times \frac{X}{100} = 60 \times \frac{Y}{100}$
3X=4Y...................(i)
And $\frac{X+Y}{2} = X - 20$
$X - Y = 40 \ldots \ldots \ldots . (ii)$
From (i) and (ii)
Y=120
60% of Y = $120 \times \frac{60}{100} = 72$

S11. Ans.(c)
Sol. Let monthly income of Vimal = 85x

Monthly income of Kisan = $85x \times \frac{140}{100} = 119x$

And Monthly income of Uday = $85x \times \frac{100}{85} = 100x$

Monthly income of Vimal = $Rs. \left(\frac{345000}{12}\right) = Rs. 28750$

So, monthly income of Kisan = $\frac{28750}{85} \times 119 = Rs. 40250$

S12. Ans.(a)
Sol. ATQ, $40 \times \frac{x}{100} = 30 \times \frac{y}{100}$

4x=3y.................(i)

And $\frac{x+y}{2} = x + 30$

$y - x = 60 \ldots \ldots \ldots. (ii)$

From (i) and (ii)

y=240

75% of second number=180

S13. Ans.(d)
Sol. Q got = 100x votes

So, P got = 50x votes

Total votes = 150x votes

For tie → Q's votes = P's votes = 75x

⇒ 100x – 75x = 200

⇒ x = 8

Total votes → 8 × 150 = 1200

Required number = 1200 × 8 = 9600

S14. Ans.(a)
Sol. Let present population = P

∴ 21,600 = P $\left(1 + \frac{20}{100}\right)^3$

P = $\frac{21,600 \times 125}{216}$

P = 12,500

S15. Ans.(a)
Sol. Total boys in class = $200 \times \frac{64}{100} = 128$

Total girls in class = 200 – 128 = 72

Fee paid by each girl = $250 \times \frac{80}{100} = 200$

Required amount = $(250 \times 128 + 200 \times 72) = 46400 \, Rs.$

S16. Ans.(c)
Sol. ATQ,

Maximum marks in each subject = $\frac{300}{3} = 100$

Let the marks in R be X%

(65 + 55 + R) = 65×3

R = 75

S17. Ans.(d)
Sol. let total people applied for post B = x

Total people applied for post A = $x + \frac{50}{100} \times x = 1.5x$

Total boys applied for post A = $\frac{70}{100} \times 1.5x = 1.05x$

Total girls applied for post A = $1.5x - 1.05x = 0.45x$ = total girls applied for post B

Required % = $\frac{0.45x}{x} \times 100 = 45\%$

S18. Ans.(e)
Sol. Let the amount P has = Rs. 5000T

Amount with Q = $\frac{6}{5} \times 5000T = 6000T$

ATQ,

6000T + 1000 = 7000

T = 1

X = 5000 + 6000 + 7000 = Rs. 18000

S19. Ans.(e)
Sol. Let the nominator and denominator be x and y respectively.

$\frac{x \times \frac{160}{100}}{y \times \frac{80}{100}} = \frac{5}{6}$

$\frac{2x}{y} = \frac{5}{6}$

$\frac{x}{y} = \frac{5}{12}$

S20. Ans.(a)
Sol. Let two numbers be a and b respectively (if a > b)

a - b = 2 ....(i)

$\frac{50}{100} \times a = \frac{60}{100} \times b$

5a=6b...............(ii)

From equations (i) and (ii) we get

a= 12 & b = 10

So, bigger number = 12

S21. Ans.(d)
Sol. Information given:

In April 2019, a man has Rs 17500

Amount increased by 20% every year in the starting of April

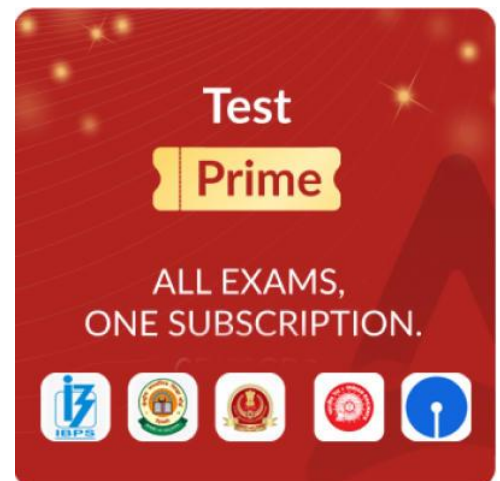Man spends 60% of total amount in April 2021

Formula Used:

Final Amount = initial amount × [20% + 20% + (20×20)/100]

Explanation:

Total amount in April 2021 = 17500 × 6/5 × 6/5 = 25200 Rs

Required amount = 25200 × $\frac{2}{5}$ = 10080 Rs