Bank of Baroda Office Assistant Sample Questions

1. **Selling price of an article is Rs. 5175 and discount of 25 percent is offered. What is the marked price of the article?**
Answer:
Given:
Selling price = Rs. 5175, Discount = 25%
Formula Used:
Selling Price= Marked price (1 - Discount)
Solution:
Marked price = m
m - 0.25m = 5175
0.75m = 5175
m = Rs 6900

2. **R can do a work in 90 days. What percent work of the total work can be done by R in 45 days?**
Answer:
Given:
R can complete work in 90 days.
Formula Used:
Days Worked / Total Days × 100%
Solution:
R can complete the work in 90 days then in 45 days R will complete half of the work because 45 days is half of 90 days.
So R can do 50% of the total work in 45 days.

3. **A student scores 75% in a test and gets 30 marks more than another student who scored 60%. What is the maximum marks in the test?**
Answer:
Given:
First student score = 75%, Second student score = 60%, Difference = 30 marks
Solution:
Let the maximum marks in the test = M.
The first student scores 75%.
The second student scores 60%
0.75M − 0.60M = 30
0.15M = 30
M = 30/0.15 = 200

4. **In one year the average monthly expenditure of Sapna was Rs. 1100 for the first 3 months of the year Rs. 1000 for the next 5 months and Rs. 1200 for the last 4 months. If the total annual saving was Rs. 1300 then what was Sapna's average monthly income?**
Answer:
Given:
Average expenditures: Rs. 1100 (3 months), Rs. 1000 (5 months), Rs. 1200 (4 months), Savings: Rs. 1300

Formula Used:
Average income = Total Expenditure + Savings / 12
Solution:
Total Expenditure = 1100 x 3 + 1000 x 5 + 1200 x 4 = 13100
Savings: 1300
Total Salary = 13100 + 1300 = 14400
Monthly income = 14400/12 = 1200

5. If the length of a rectangle is increased by 14.28 percent then by how much percentage its breadth should be reduced to keep the area same?
Answer:
Given:
Length increased by 14.28%, New length = 8 units (original 7 units)
Formula Used:
% decrease in breadth = (Old Breadth - New Breadth) / Old Breadth × 100
Solution:
14.28% → 1/7
Length changes from 7 to 8.
Breadth changes from 8 to 7.
Percentage decreased in breadth size = {(8 - 7)/8} × 100 = 12.5%

6. Marked price of a chair is Rs. 2000. After giving two successive discounts of 20 percent and x percent the chair is sold for Rs. 1400 What is the value of x?
Answer:
Given:
Marked price = Rs. 2000, Selling price = Rs. 1400, First discount = 20%
Formula Used:
Selling price = Marked price × (1 - discount%)
Selling Price after first discount = Rs. 2000 × (1 - 20/100) = Rs. 1600
Let the second discount be x%.
So, Selling Price after second discount, 1600 × (1 - x/100) = Rs. 1400
x = (1600 - 1400) / 1600 × 100 = 12.5%

7. A sum of money placed at compound interest (compounding annually) doubles itself in 10 years. Find the time in which it will amount to 4 times itself.
Answer:
Given:
Amount doubles in 10 years.
Formula Used:
$$\text{Amount} = \text{Principal} \times \left(1 + \frac{\text{Rate}}{100}\right)^{\text{Time}}$$
Solution:
P(1+(R/100))^10 = 2P
1+(R/100)^10 = 2
(1+(R/100))^T = 4 = 2^2
2 x 10 = 20yrs

Alternate Method:
For compound interest doubling: 2^n = Amount multiple
(1 + R/100)^10 = 2
Doubling time to quadruple: 2 × 10 = 20 years

8. Find the value of (7 + 33) × (44 ÷ 2) × (5 x 5).
Answer:
Concept Used:

Priority wise Operation	Symbol/चिह्न
B-Bracket/कोष्ठक	(), {}, []
O-Of/का	Of/का
D-Division/विभाजन	/,÷
M-Multiplication/गुणा	×, *
A-Addition/जोड़	+
S-Subtraction/घटाव	-

Solution:
= (7 + 33) × (44 ÷ 2) × (5 x 5)
= 40 × 22 × 25 = 22000

9. Two trains are running in opposite direction with the same speed. If the length of each train is 320 metres and they cross each other in 18 seconds then what is the speed of each train?
Answer:
Given:
Length of each train = 320 meters, Time = 18 seconds
Formula Used:
Relative Speed = Total Distance / Time
Solution:
Let the speed of each train be x m/sec
Then relative speed of the two trains = 2x m/sec
Total distance covered = 320 + 320 = 640m
Total time = 18sec
So 2x = 640/18
x = 64 km/hr.
∴ Speed of each train = 64 km/hr.

10. Both A and B sells their watch at the rate of Rs. 5000 per watch. A earned a profit of 25 percent while B incurred a loss of 10 percent. What is the ratio of cost prices of A and B?
Answer:
Given:
Selling price for both = Rs. 5000,
A's profit = 25%,
B's loss = 10%

Formula Used:

$$CP = \frac{SP \times 100}{100 + Gain\ \%}$$

$$CP = \frac{SP \times 100}{100 - Loss\%}$$

Solution:

Cost price for A = 5000 × 100/125 = 4000

Cost price for B = 5000 × 100/90 = 5555.56

Ratio of both CP = 4000/5555.56 = 18 : 25

11. What is the value of [41×{36×4÷(96×2÷24)}]

Answer:

Given:

[41×{36×4÷(96×2÷24)}]

Concept Used:

Priority wise Operation	Symbol/चिह्न
B-Bracket/कोष्ठक	(), {}, []
O-Of/का	Of/का
D-Division/विभाजन	/,÷
M-Multiplication/गुणा	×, *
A-Addition/जोड़	+
S-Subtraction/घटाव	-

Solution:

$$[41 \times \{36 \times 4 \div (96 \times 2 \div 24)\}]$$

$$\left[41 \times \left\{36 \times 4 \div \left(96 \times \frac{1}{12}\right)\right\}\right]$$

$$[41 \times \{36 \times 4 \div 8\}]$$

$$\left[41 \times \left\{36 \times \frac{1}{2}\right\}\right]$$

$$41 \times 18 = 738$$

12. Rs. 7200 is divided among P Q and R in the ratio of 1/2: 4: 3/2 respectively. What is the share of R?

Answer:

Given:

Total amount = Rs. 7200, Ratio = 1/2 : 4 : 3/2

Formula Used:

Share of R = (R's ratio / Sum of ratios) × Total amount

Solution:

Total parts = 1/2 + 8/2 + 3/2 = 12 / 2 = 6

6 = 7200

one part = Rs. 7200 / 6 = Rs. 1200

R's share = 3/2 parts

R's share in rupees = Rs. 1800

13. Evaluate: {(175 × 72 ÷ 24 + 5) × 20} ÷ 2

Answer:

Given:

{(175 × 72 ÷ 24 + 5) × 20} ÷ 2

Concept Used:

Priority wise Operation	Symbol/चिह्न
B-Bracket/कोष्ठक	(), {}, []
O-Of/का	Of/का
D-Division/विभाजन	/,÷
M-Multiplication/गुणा	×, *
A-Addition/जोड़	+
S-Subtraction/घटाव	-

Solution:

= {(175 × 72 ÷ 24 + 5) × 20} ÷ 2

= {175 x 3 + 5) x 20} ÷2

= (530 x 20) ÷2 = 5300

14. In an exam out of total number of appeared students 93 percent students passed and 9275 students failed. What is the total number of students appeared in the exam?

Answer:

Given:

Failed students = 9275, 93% pass, so 7% fail.

Solution:

Let the total number of students be x

7 percent of students are 9275

7x = 9275

x = 132500

100 percent of students = 132500

15. The simple interest received on a sum for 40 years is 2/5 of the sum. What is the annual rate of interest?

Answer:

Given:

Simple interest = 2/5 of sum in 40 years

Formula Used:

Simple Interest = $\frac{P \times R \times T}{100}$

Solution:

Let the Principal amount be P

2/5 P = 40PR/100

R = 1%

16. **If M:N = 9:6 then what is the value of (M + N):(M - N)?**
Answer:
Given:
M:N = 9:6
Solution:
(M + N):(M - N)
= 9+6 : 9-6
= 15 : 3 = 5 : 1

17. **Rohit buys an old bat for Rs. 2320 and spends Rs. 180 on its repairing. If he sells it for Rs. 2400 then what is the loss percentage?**
Answer:
Given:
Cost price = Rs. 2320, Repairing cost = Rs. 180, Selling price = Rs. 2400
Formula Used:
$$\text{Loss \%} = \left(\frac{\text{Cost Price} - \text{Selling Price}}{\text{Cost Price}}\right) \times 100$$
Solution:
Total cost price of the bat = Rs. (2320 + 180) = Rs. 2500
Selling price of the bat = Rs. 2400
Loss percentage = 100/2500 × 100% = 4%

18. **The ages of 7 men in a cricket team are 26, 25, 21, 29, 24, 28 and 22. What is their average age?**
Answer:
Given:
Ages: 26, 25, 21, 29, 24, 28, 22
Formula Used:
Average = Sum of Ages / Number of People
Solution:
Average age = 175/7 = 25

19. **There are 44 mangoes 121 bananas and 11 apples they have to be arranged in several rows in such a way that every row contains equal number of fruits and each row contains fruit of one type. What is the minimum number of rows?**
Answer:
Given:
44 mangoes, 121 bananas, 11 apples
Formula Used:
Minimum number of rows = Sum of Total fruits / HCF of all fruits
Solution:
HCF of 44, 121, 11 = 11.
Each row contains 11 fruits
No. of mangoes row = 4
No. of apples row = 1
No. of bananas row = 11
Total row = 4+1+11= 16 rows

20. What is the curved surface area of a cylinder having radius of base as 70 cm and height as 14 cm?

Answer:

Given:

Radius (r) = 70 cm

Height (h) = 14 cm

Formula Used:

Curved Surface Area (CSA) = $2\pi rh$

Solution:

Curved surface area = $2 \times 22/7 \times 70 \times 14 = 6160\ cm^2$

21. A trader marks his goods 50% above the cost price and offers a discount of 20%. What is the percentage profit the trader makes after offering the discount?

Answer:

Given:

Cost Price (CP) = Rs. 100

Marked Price (MP) = 150% of CP

Discount = 20%

Formula Used:

Profit Percentage = (SP - CP) / CP × 100

Solution:

Let the original C.P. be Rs. 100.

Marked price = 50% of 100 + 100 = 150

P. =150 – 20% of 150 = 150 – 30 = 120.

% profit = (120–100) × 100/100 = 20%

Thus, the profit percent is 20%.

22. Radius of a sphere is increased by 50 percent. What will be the percentage increase in its volume?

Answer:

Given:

Initial Radius = r

Increased Radius = 1.5r

Formula Used:

Volume of sphere = $4/3\pi r^3$

Solution:

Let the radius be x

Vol. of sphere = $4/3\pi r^3$

ATQ

New radius = 50x/100 + x = 150x/100 = 1.5r

$$\text{New vol.} = \frac{4}{3} \times \pi(1.5r)^3 = \frac{4}{3} \times \pi 3.375 \times r^3$$

$$\text{Change in Volume} = \frac{\frac{4}{3} \times \pi 3.375 \times r^3 - \frac{4}{3}\pi \times r^3}{\frac{4}{3} \times \pi \times r^3}$$

$$\text{Change in Volume} = \frac{3.375 - 1}{1} = 2.375$$

23. 25 percent of 20 percent of a number is equal to 250. What is the 35 percent of that number?

Answer:

Given:

25% of 20% of a number = 250

Solution:

25 percent of 20 percent of a number x = 250

0.25(0.2)x = 250

0.05x = 250

x = 250/0.05

x = 5000

0.35 × 5000 = 1750

24. Rs. 9000 is lent at the rate of 80 percent per annum on compound interest (compounded half yearly). What will be the compound interest of 12 months?

Answer:

Given:

Principal (P) = Rs. 9000

Rate of Interest (R) = 80% per annum

Time (T) = 12 months (1 year)

Formula Used:

A = P(1 + R/n)^(nt)

Compound Interest (CI) = A - P

Solution:

Half yearly rate = 80%/2 = 40%

A = 9000(1 + 40/100)2 = 17640

CI = 17640 – 9000 = 8640

25. Rs.8400 is divided among P, Q and R in the ratio of $\frac{2}{3}:3:\frac{1}{3}$ respectively. What is the share of R?

Answer:

Given:

Total amount = Rs. 8400

Ratio = 2/3:3:1/3

Formula Used:

Share = (Part / Total Ratio) × Total Amount

Solution:

2x/3 + 3x + x/3 = 8400

=> (2x + x + 9x)/3 = 8400

=> 12x = 8400 × 3

=> x = 8400/4 = 2100

=> The share of R = x/3 = 2100/3 = 700

26. Swapnil can build a sofa in 16 days. Working together with Revathi he can finish the work in 128/17 days. Find the number of days taken by Revathi to complete the work if she works alone.

Answer:

Given:

Time taken by Swapnil = 16 days

Combined time = 128/17 days

Formula Used:

Work = Time × Rate

Solution:

Let Swapnil rate of work done be s and Revathi work rate be r.

Swapnil can do in 16 days

So, total work , w = 16s

Now,

$$\frac{(s+r)\times 128}{17} = 16\times s$$

$$r = \frac{16s\times 17}{128} - s$$

$$r = (1.125)s$$

So, putting s =$\frac{w}{16}$

$$r = 1.125\times \frac{w}{16} \implies w = \frac{r\times 16}{1.125} = (14.22)r$$

As we know, work (w)=rate(r)×time(t)

comparing, w=14.22×r

Thus, Time for Revathi to complete work alone = approx. 14.22 days = $\frac{128}{9}$ days

27. The simple interest received on a sum for 5 years is 2/5 of the sum. What is the annual rate of interest?

Answer:

Given:

Simple Interest (SI) = 2/5 × P, Time (T) = 5 years

Formula Used:

SI = (P × R × T) / 100

Solution:

2/5 × P = (P × R × 5)/100

⇒ R = 200/25

∴ R = 8 %

28. Find the maximum number of students among whom 1003 chocolates and 2703 candies can be distributed such that each student gets the same number of each.

Answer:

Given:

Number of chocolates = 1003

Number of candies = 2703

Formula Used:

HCF of the numbers

Solution:
⇒ 1003 = 17 × 59
⇒ 2703 = 17 × 159
H.C.F of
1003 and 2703 = 17

29. If 45 percent of X is equal to 15 percent of Y, then what is the value of X : Y?
Answer:
Given:
45% of X = 15% of Y
Solution:
45% of x = 15% of y
45x/100=15y/100
⇒x/y = 1/3
Therefore, x : y is 1: 3.

30. A train of length 384 metres crosses an electric pole in 12 seconds and crosses another train of the same length travelling in opposite direction in 12 seconds. What is the speed of the second train?
Answer:
Given:
Length of the train = 384 m
Time = 12 seconds
Formula Used:
Speed = Distance / Time
Solution:
The speed of the first train is 384/12 = 32 m/s.
Let the speed of the second train = x m/s
Relative speed = x + 32
Total length of the train = 384 + 384 = 768
Time = 768/(x +32)
12 = 768/(x +32)
(x +32) = 64
x = 32 m/s

31. The average of five numbers is 32. If one number is removed, then the average becomes 28. What is the removed number?
Answer:
Given:
Average of 5 numbers = 32
Average of 4 numbers = 28
Formula Used:
Sum of numbers = Average × Number of terms
Solution:
Sum of these numbers = 32 × 5 = 160
Sum of these 4 numbers = 28 × 4 = 112
Removed number = 160 – 112 = 48

32. The marked price of an article is 60 percent more than its cost price. If 20 percent discount is given, then what will be the profit percentage?

Answer:

Given:

Marked Price (MP) = 160% of Cost Price (CP)

Discount = 20%

Formula Used:

Profit Percentage = (Selling Price - Cost Price) / Cost Price × 100

Solution:

Let the CP = Rs.100

MP = 100 + (60/100 × 100)

= Rs160

Discount = 20/100 × Rs160

= Rs32

SP=MP−Discount

SP = Rs (160−32)

= Rs128

Profit = Rs (128−100)

= Rs28

Profit%

= (28/100×100)%

=28%

33. If the cost price of 6 pens is the same as the selling price of 5 pens, find the profit/loss percentage.

Answer:

Given:

Cost Price of 6 pens = Selling Price of 5 pens

Formula Used:

Profit Percentage = $\frac{SP-CP}{CP} \times 100$

Solution:

6 × C.P. = 5 × S.P.

=> S.P/C.P = 6/5

Let C.P. and S.P. be 5x and 6x respectively.

Profit % = $\text{Profit \%} = \frac{6x-5x}{5x} \times 100$

Profit % =x/5x × 100

Profit % = **20**

34. What is the value of $(0.1)^2 + (0.01)^2$?

Answer:

Solution:

= $(0.1)^2 + (0.01)^2$

= 0.01 + 0.0001

= 0.0101

35. What will be the average of all the prime numbers before 32?

Answer:

Given:

Prime numbers before 32

Formula Used:

Average = (Sum of numbers) / (Number of terms)

Solution:

Prime numbers before 32 = 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31

Average = (31 + 29 + 23 + 19 + 17 + 13 + 11 + 7 + 5 + 3 + 2)/7 = 160/11 = 14.54

36. Selling price of a table is Rs. 6875. If profit percentage is 25 percent, then what is the cost price of table?

Answer:

Given:

Selling price (SP) = Rs. 6875

Profit percentage = 25%

Formula Used:

SP = CP + Profit

Solution:

6875 = 125/100 x CP

CP = Rs. 5500

37. If 72 binders can bind 720 books in 22 days, how many binders will be required to bind 660 books in 12 days?

Answer:

Given:

Number of binders (B1) = 72

Number of books (N1) = 720

Number of days (D1) = 22

Number of books (N2) = 660

Number of days (D2) = 12

Formula Used:

Work = (Binders × Days) / Number of books

Solution:

work done for 1 book = (binders x days) / n.o of books=(22 x72)/720

work done for 660 books in 12 days for (1 book work)= (binders x 12) /660

(binders x 12) /660=(22 x72)/720

binders = 121

38. The price of 3 notebooks and 6 pen is Rs. 3000. With the same money one can buy a notebooks and 12 pen. Raju wants to buy 15 pen, how much will he have to pay?

Answer:

Given:

The Price of 3 Notebook + 6 Pen = Rs. 3000

The Price of one Notebook + 12 Pen = Rs. 3000

Solution:

Let notebook price be N and pen price be P.

3N + 6P = 3000

N + 12P = 3000

3(3000−12P) + 6P = 3000

9000 − 36P + 6P = 3000

9000 − 30P = 3000

−30P = 3000 − 9000

−30P = −6000

P = −6000/-30

P = 200

Cost of 15 pens = 15 × 200 = **Rs. 3000**

39. The product of two numbers is 720 and their Highest Common Factor is 4. What is the Least Common Multiple of these numbers?

Answer:

Given:

Product of two numbers = 720

HCF = 4

Formula Used:

Product of two numbers = LCM × HCF

Solution:

Product of 2 numbers = LCM × HCF

720 = 4 × LCM

∴ LCM =720/4 = 180