100 Quantitative Aptitude Questions and Answers for Freshers

Number Series

1. Find the next number in the series: 2, 4, 8, 16,...? Answer: 32 (Each number is multiplied by 2)
2. Find the next number in the series: 5, 10, 15, 20,...? Answer: 25 (Each number increases by 5)
3. Find the next number in the series: 1, 4, 9, 16,...? Answer: 25 (Squares of 1, 2, 3, 4, 5)
4. Find the next number in the series: 3, 6, 18, 72,...? Answer: 360 (Multiplying by 2, 3, 4, 5)
5. Find the next number in the series: 7, 14, 28, 56,….? Answer: 112 (Each number is multiplied by 2)

Arithmetic Operations

1. What is 25% of 200? Answer: 50 (25% of 200 is 200 × 0.25)
2. What is the square root of 144? Answer: 12 (12 × 12 = 144)
3. What is the sum of the first 10 natural numbers? Answer: 55 (Sum = n(n+1)/2 = 10(10+1)/2)
4. What is 15% of 300? Answer: 45 (15% of 300 is 300 × 0.15)
5. What is the product of 7 and 8? Answer: 56 (7 × 8 = 56)

Simple and Compound Interest

1. Find the simple interest on $1000 at 5% per annum for 2 years. Answer: $100 (SI = PRT/100 = 1000 × 5 × 2 / 100)
2. Find the compound interest on $1500 at 4% per annum for 3 years. Answer: $187.14 (CI = P(1 + R/100)^T - P)
3. What is the amount after 2 years if the principal is $2000 at 6% p.a. simple interest? Answer: $2240 (Amount = P + SI = 2000 + (2000 × 6 × 2 / 100))
4. Calculate the compound interest on $1000 at 10% per annum for 2 years. Answer: $210 (CI = 1000(1 + 10/100)^2 - 1000)
5. Find the amount after 1 year if the principal is $5000 at 8% p.a. compound interest. Answer: $5400 (Amount = P(1 + R/100)^T)

Profit and Loss

1. A man buys an article for $200 and sells it for $250. Find his profit percentage. Answer: 25% (Profit% = (Profit/Cost Price) × 100)
2. If a product costs $500 and is sold at a loss of 10%, find the selling price. Answer: $450 (SP = CP - (Loss% of CP))
3. A shopkeeper sells a pen for $20 with a profit of 25%. Find the cost price. Answer: $16 (CP = SP / (1 + Profit%))

4. If a product is sold for $80 at a 20% loss, what is the cost price? Answer: $100 (CP = SP / (1 - Loss%))
5. Find the selling price if the cost price is $150 and the profit is 30%. Answer: $195 (SP = CP + (Profit% of CP))

Ratios and Proportions

1. Divide $1000 between A and B in the ratio of 3:2. Answer: A = $600, B = $400 (Total parts = 3+2=5; A = 1000×3/5, B = 1000×2/5)
2. If 3x = 6y, find the ratio of x to y. Answer: 2:1 (x/y = 6/3 = 2/1)
3. The ratio of ages of A and B is 4:3. If A is 24 years old, find the age of B. Answer: 18 years (A/B = 4/3, B = 24×3/4)
4. In a mixture, the ratio of milk to water is 5:3. If there are 8 liters of water, find the amount of milk. Answer: 13.33 liters (Milk = 8×5/3)
5. A recipe requires ingredients in the ratio 2:3:5. If you have 6 parts of the first ingredient, how much of the third ingredient is needed? Answer: 15 parts (Ratio is maintained as 2:5 for first and third ingredients)

Time, Speed, and Distance

1. If a car travels at 60 km/hr for 3 hours, how far does it go? Answer: 180 km (Distance = Speed × Time)
2. A train travels 240 km in 4 hours. What is its speed? Answer: 60 km/hr (Speed = Distance/Time)
3. How long will it take to travel 150 km at a speed of 50 km/hr? Answer: 3 hours (Time = Distance/Speed)
4. If a person walks at 4 km/hr, how long will it take to walk 12 km? Answer: 3 hours (Time = Distance/Speed)
5. A car travels 90 km at 30 km/hr and another 60 km at 20 km/hr. Find the average speed. Answer: 24 km/hr (Average Speed = Total Distance / Total Time)

Work and Time

1. If A can do a job in 5 days and B can do it in 10 days, how long will it take for both to complete it together? Answer: 3.33 days (1/A + 1/B = 1/Total Time)
2. A can finish a task in 8 days, and B can finish it in 12 days. If they work together, how long will it take? Answer: 4.8 days (1/A + 1/B = 1/Total Time)
3. If 6 workers can build a wall in 10 days, how long will it take 15 workers to build it? Answer: 4 days (More workers, less time; use inverse proportion)
4. A can do a job in 15 days, and B can do it in 20 days. How many days will it take for them to complete it together? Answer: 8.57 days (1/A + 1/B = 1/Total Time)
5. If 12 men can complete a work in 18 days, how long will it take 8 men to complete it? Answer: 27 days (Use inverse proportion)

Permutations and Combinations

1. How many ways can you arrange the letters in the word "CAT"? Answer: 6 ways (3! = 6)
2. How many ways can 4 books be arranged on a shelf? Answer: 24 ways (4! = 24)
3. How many combinations of 3 items can be selected from 5? Answer: 10 ways (5C3 = 5! / (3!(5-3)!)
4. How many permutations of 4 items can be selected from 6? Answer: 360 ways (6P4 = 6! / (6-4)!)
5. In how many ways can a committee of 3 be formed from 7 people? Answer: 35 ways (7C3 = 7! / (3!(7-3)!)

Percentages

1. What is 20% of 150? Answer: 30 (20% of 150 is 150 × 0.2)
2. If a number increases from 50 to 70, what is the percentage increase? Answer: 40% (Increase = (New Number - Original Number) / Original Number × 100)
3. What is 60% of 250? Answer: 150 (60% of 250 is 250 × 0.6)
4. If a product's price decreases from $200 to $150, what is the percentage decrease? Answer: 25% (Decrease = (Original Number - New Number) / Original Number × 100)
5. What is 75% of 320? Answer: 240 (75% of 320 is 320 × 0.75)

Geometry

1. Find the area of a rectangle with a length of 5 cm and a width of 3 cm. Answer: 15 cm² (Area = Length × Width)
2. Find the perimeter of a square with a side length of 4 cm. Answer: 16 cm (Perimeter = 4 × Side Length)
3. Find the area of a circle with a radius of 7 cm. Answer: 154 cm² (Area = πr^2, use π = 22/7)
4. Find the circumference of a circle with a diameter of 10 cm. Answer: 31.4 cm (Circumference = πd, use π = 3.14)
5. Find the volume of a cube with a side length of 3 cm. Answer: 27 cm³ (Volume = Side³)

Algebra

1. Solve for x: 2x + 3 = 7. Answer: x = 2 (2x = 4, x = 4/2)
2. Solve for y: 3y - 5 = 10. Answer: y = 5 (3y = 15, y = 15/3)
3. Solve for x: x^2 - 9 = 0. Answer: x = 3 or x = -3 (x^2 = 9, x = ±3)
4. Solve for x: 4x + 7 = 19. Answer: x = 3 (4x = 12, x = 12/4)
5. Solve for y: y/2 + 4 = 10. Answer: y = 12 (y/2 = 6, y = 6×2)

Trigonometry

1. Find sin(30°). Answer: 0.5 (Standard trigonometric value)
2. Find cos(60°). Answer: 0.5 (Standard trigonometric value)
3. Find tan(45°). Answer: 1 (Standard trigonometric value)

4. If sin(θ) = 0.5, find θ. Answer: 30° (Inverse sine function)
5. Find cos(0°). Answer: 1 (Standard trigonometric value)

Probability

1. What is the probability of rolling a 3 on a 6-sided die? Answer: 1/6 (One favorable outcome out of 6 possible outcomes)
2. What is the probability of flipping heads on a coin? Answer: 1/2 (One favorable outcome out of 2 possible outcomes)
3. What is the probability of drawing an ace from a standard deck of 52 cards? Answer: 1/13 (4 aces out of 52 cards)
4. What is the probability of rolling an even number on a 6-sided die? Answer: 1/2 (3 favorable outcomes out of 6 possible outcomes)
5. What is the probability of picking a red card from a standard deck of 52 cards? Answer: 1/2 (26 red cards out of 52)

Miscellaneous

1. Convert 0.75 to a fraction. Answer: 3/4 (0.75 = 75/100 = 3/4)
2. Convert 0.25 to a percentage. Answer: 25% (0.25 × 100)
3. What is the decimal equivalent of 1/8? Answer: 0.125 (Divide 1 by 8)
4. Convert 45% to a decimal. Answer: 0.45 (45/100)
5. What is 7/10 as a percentage? Answer: 70% (7/10 × 100)

Logical Reasoning

1. If all cats are animals, and some animals are pets, can some cats be pets? Answer: Yes (Some overlap in categories)
2. If A is taller than B, and B is taller than C, who is the tallest? Answer: A (Based on the given order)
3. If the sequence is ABC, DEF, GHI, what comes next? Answer: JKL (Alphabetical sequence)
4. If all squares are rectangles, and all rectangles have four sides, do all squares have four sides? Answer: Yes (Logical conclusion)
5. If every person in a room shakes hands with every other person exactly once, how many handshakes occur in a room of 4 people? Answer: 6 (n(n-1)/2 for n = 4)

Word Problems

1. If a car travels 100 km in 2 hours, what is its speed? Answer: 50 km/hr (Speed = Distance/Time)
2. A person bought 3 apples at $1 each and 2 oranges at $1.5 each. What is the total cost? Answer: $6 (3×1 + 2×1.5)
3. If a train leaves the station at 9 AM and travels 200 km at 50 km/hr, what time does it arrive? Answer: 1 PM (Time taken = 200/50 = 4 hours)

4. If a piece of cloth costs $5 per meter, how much does 20 meters cost? Answer: $100 (5 × 20)
5. If a job takes 12 hours for one person to complete, how long will it take for 3 people to complete it together? Answer: 4 hours (Work divided among 3 people)

Puzzles

1. If you have 2 coins that add up to 30 cents and one of them is not a nickel, what are the coins? Answer: A quarter and a nickel (One is not a nickel, but the other can be)
2. What is the next number in the series: 1, 4, 9, 16,...? Answer: 25 (Squares of 1, 2, 3, 4, 5)
3. If a farmer has 17 sheep and all but 9 die, how many are left? Answer: 9 (All but 9 die)
4. If you take 3 apples from a basket of 10, how many apples do you have? Answer: 3 (You have the apples you took)
5. A man is twice as old as his son. 20 years ago, he was 12 times as old as his son. How old is the son now? Answer: 23 (Solve the equations: Father's age = 2 × Son's age; 20 years ago, Father = 12 × Son)

Data Interpretation

1. If the bar graph shows sales of $200, $300, $250 for three months, what is the total sales? Answer: $750 (Sum of all sales)
2. If a pie chart shows 25% for product A, what fraction of the whole does this represent? Answer: 1/4 (25% = 25/100 = 1/4)
3. If the line graph shows a 10% increase each month from an initial value of 100, what is the value after 3 months? Answer: 133.1 (Use compound interest formula)
4. If a table shows expenses of $500, $600, and $700 for three quarters, what is the average expense? Answer: $600 (Sum/Number of items = 1800/3)
5. If the histogram shows frequencies of 5, 10, and 15 for three categories, what is the total frequency? Answer: 30 (Sum of all frequencies)

Sequences and Series

1. Find the 5th term of the arithmetic sequence 2, 5, 8, 11,...? Answer: 14 (Add common difference 3)
2. Find the 6th term of the geometric sequence 3, 9, 27,...? Answer: 729 (Multiply by common ratio 3)
3. Find the sum of the first 10 terms of the arithmetic sequence 1, 3, 5, 7,...? Answer: 100 (Use sum formula S = n/2(2a + (n-1)d))
4. Find the sum of the first 4 terms of the geometric sequence 1, 2, 4, 8,...? Answer: 15 (Sum of 1, 2, 4, 8)
5. Find the nth term of the arithmetic sequence 4, 8, 12, 16,...? Answer: 4n (General term is a + (n-1)d)

Mixtures and Allegations

1. If 3 liters of a 20% solution is mixed with 2 liters of a 30% solution, what is the concentration of the new mixture? Answer: 24% (Use weighted average method)
2. If 2 kg of sugar costing $5/kg is mixed with 3 kg costing $6/kg, what is the cost per kg of the mixture? Answer: $5.6/kg (Use weighted average method)
3. If 4 liters of water is added to 1 liter of a 50% alcohol solution, what is the new concentration? Answer: 10% (Calculate total volume and percentage)
4. If 2 kg of rice costing $10/kg is mixed with 3 kg costing $15/kg, what is the cost per kg of the mixture? Answer: $13/kg (Use weighted average method)
5. If 3 liters of a 25% solution is mixed with 2 liters of a 35% solution, what is the concentration of the new mixture? Answer: 28% (Use weighted average method)