Numerical Aptitude - Practice Questions (3 for each sub-topic)

Number System

1. **Find the HCF and LCM of 36 and 48.**
2. **Is 791 a prime number?**
3. **Find the smallest number which when divided by 6, 9, and 15 leaves a remainder 3.**

Percentages

1. **What is 25% of 240?**
2. **If a number increases from 80 to 100, what is the percentage increase?**
3. **A student scores 540 out of 600. Find the percentage.**

Profit and Loss

1. **A shopkeeper buys an item for Rs. 250 and sells it for Rs. 300. Find the profit percentage.**
2. **An item is sold at a loss of 10% for Rs. 450. Find the cost price.**
3. **If an article is marked 20% above the cost price and a discount of 10% is given, find the profit percentage.**

Simple & Compound Interest

1. **Find the simple interest on Rs. 2000 for 2 years at 5% per annum.**
2. **Calculate compound interest on Rs. 5000 for 2 years at 10% per annum.**
3. **What will be the amount after 3 years if Rs. 10000 is compounded annually at 8%?**

Time & Work Basics

1. **A can do a job in 10 days, B can do it in 15 days. In how many days will they finish it together?**
2. **If A does half the job in 6 days, how long will he take to complete the job?**
3. **If B can do a work in 9 days, how much work can he do in 3 days?**

Pipes & Cisterns

1. **Pipe A can fill a tank in 6 hours. Pipe B can empty it in 9 hours. Find the time to fill the tank.**
2. **Pipe A fills in 3 hours, Pipe B fills in 6 hours. Both opened together, how long to fill the tank?**
3. **Pipe A fills in 5 hours. Pipe B empties in 10 hours. Time to fill the tank with both open?**

Work Efficiency

1. **A is twice as efficient as B. A alone can do a work in 12 days. How long will they take together?**

2. **A and B together can do a job in 8 days. B alone does it in 12 days. How long will A take?**
3. **If A can do a job in 10 days, and B in 5 days, find their efficiency ratio.**

Probability Basics

1. **What is the probability of getting a head when a coin is tossed?**
2. **What is the probability of rolling a 3 or 4 on a dice?**
3. **A bag contains 3 red and 2 green balls. What is the probability of drawing a red ball?**

Permutation & Combination

1. **How many ways can 3 students be selected from a group of 5?**
2. **In how many ways can 4 books be arranged on a shelf?**
3. **From 6 letters, how many 3-letter words can be formed?**

Probability Problems

1. **A number is randomly chosen from 1 to 10. Probability it is even?**
2. **A card is drawn from a deck. Find probability of getting a king.**
3. **What is the probability of getting a multiple of 3 when rolling a dice?**

Series Completion

1. **Find the next number: 2, 4, 8, 16, ?**
2. **Complete the series: 5, 10, 20, 40, ?**
3. **What comes next: 1, 1, 2, 3, 5, ?**

Pattern Recognition

1. **Fill in the blank: 7, 14, 28, ?, 112**
2. **Identify the pattern: 1, 4, 9, 16, ?**
3. **What is the missing number: 3, 6, 12, 24, ?**

Missing Numbers

1. **Find the missing number: 4, 9, ?, 25, 36**
2. **What is missing: 100, 90, ?, 70, 60**
3. **Find the blank: 2, 6, 12, ?, 30**

Logical Deduction

1. **All apples are fruits. Some fruits are sweet. Are all apples sweet?**
2. **If all pens are books and some books are papers, are all pens papers?**
3. **If some cats are dogs and all dogs are animals, are all cats animals?**

Syllogisms

1. **Statements: All humans are mammals. All mammals are animals. Conclusion?**
2. **Statements: Some birds are animals. All animals are living beings. Conclusion?**
3. **Statements: All roses are flowers. Some flowers are red. Conclusion?**

Puzzles

1. **A clock shows 3:15. What is the angle between the hands?**
2. **If 3 pens cost Rs. 15, how much do 7 pens cost?**
3. **If A is older than B, and B is older than C, who is the oldest?**

Tables

1. **From a table of sales data, identify the month with highest revenue.**
2. **What is the average sales over 6 months?**
3. **Compare growth in month 1 and month 6.**

Graphs & Charts

1. **From a bar chart, identify the product with maximum sales.**
2. **From a pie chart, what percent is allocated to Product A?**
3. **Read a line graph to find sales in February.**

Data Analysis

1. **Find median of 9, 5, 3, 8, 7.**
2. **What is the mode in 4, 5, 5, 6, 7?**
3. **Calculate standard deviation of 2, 4, 6.**

Analogies

1. **Pen : Write :: Knife : ?**
2. **Fire : Heat :: Ice : ?**
3. **Bird : Fly :: Fish : ?**

Coding & Decoding

1. **If CAT = DBU, then DOG = ?**
2. **In a code, TREE is written as USFF. Write code for LEAF.**
3. **If TABLE = UBCMF, decode ZHOFRPH.**

Blood Relations

1. **A is B's sister. B is C's brother. How is A related to C?**
2. **P is Q's mother, Q is R's father. How is P related to R?**
3. **M is N's daughter, N is O's son. How is M related to O?**

Numerical Aptitude - Practice Questions (3 for each sub-topic) with Answers

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Number System

1. Find the HCF and LCM of 36 and 48.
   Answer: HCF = 12, LCM = 144
2. Is 791 a prime number?
   Answer: No, 791 = 7 × 113
3. Find the smallest number which when divided by 6, 9, and 15 leaves a remainder 3.
   Answer: LCM of 6, 9, 15 = 90 → Answer = 90 + 3 = 93

Percentages

1. What is 25% of 240?
   Answer: 60
2. If a number increases from 80 to 100, what is the percentage increase?
   Answer: (20/80) × 100 = 25%
3. A student scores 540 out of 600. Find the percentage.
   Answer: (540/600) × 100 = 90%

Profit and Loss

1. A shopkeeper buys an item for Rs. 250 and sells it for Rs. 300. Find the profit percentage.
   Answer: Profit = 50; (50/250) × 100 = 20%
2. An item is sold at a loss of 10% for Rs. 450. Find the cost price.
   Answer: CP = 450/0.9 = Rs. 500
3. If an article is marked 20% above the cost price and a discount of 10% is given, find the profit percentage.
   Answer: Net SP = 1.2 × CP × 0.9 = 1.08 × CP → Profit = 8%

Simple & Compound Interest

1. Find the simple interest on Rs. 2000 for 2 years at 5% per annum.
   Answer: SI = (2000×2×5)/100 = Rs. 200
2. Calculate compound interest on Rs. 5000 for 2 years at 10% per annum.
   Answer: Amount = 5000(1+0.10)^2 = 6050 → CI = 6050 - 5000 = Rs. 1050
3. What will be the amount after 3 years if Rs. 10000 is compounded annually at 8%?
   Answer: A = 10000×(1.08)^3 ≈ Rs. 12597.12

Time & Work Basics

1. A can do a job in 10 days, B can do it in 15 days. In how many days will they finish it together?
   Answer: 1/10 + 1/15 = 1/6 → 6 days
2. If A does half the job in 6 days, how long will he take to complete the job?
   Answer: 12 days

3. If B can do a work in 9 days, how much work can he do in 3 days?
   Answer: 3/9 = 1/3

Pipes & Cisterns

1. Pipe A can fill a tank in 6 hours. Pipe B can empty it in 9 hours. Find the time to fill the tank.
   Answer: 1/6 - 1/9 = 1/18 → 18 hours
2. Pipe A fills in 3 hours, Pipe B fills in 6 hours. Both opened together, how long to fill the tank?
   Answer: 1/3 + 1/6 = 1/2 → 2 hours
3. Pipe A fills in 5 hours. Pipe B empties in 10 hours. Time to fill the tank with both open?
   Answer: 1/5 - 1/10 = 1/10 → 10 hours

Work Efficiency

1. A is twice as efficient as B. A alone can do a work in 12 days. How long will they take together?
   Answer: B takes 24 days. 1/12 + 1/24 = 1/8 → 8 days
2. A and B together can do a job in 8 days. B alone does it in 12 days. How long will A take?
   Answer: 1/8 - 1/12 = 1/24 → A alone = 24 days
3. If A can do a job in 10 days, and B in 5 days, find their efficiency ratio.
   Answer: A:B = 1/10 : 1/5 = 1:2

Probability Basics

1. What is the probability of getting a head when a coin is tossed?
   Answer: 1/2
2. What is the probability of rolling a 3 or 4 on a dice?
   Answer: 2/6 = 1/3
3. A bag contains 3 red and 2 green balls. What is the probability of drawing a red ball?
   Answer: 3/5

Permutation & Combination

1. How many ways can 3 students be selected from a group of 5?
   Answer: 5C3 = 10
2. In how many ways can 4 books be arranged on a shelf?
   Answer: 4! = 24
3. From 6 letters, how many 3-letter words can be formed?
   Answer: 6P3 = 6×5×4 = 120

Probability Problems

1. A number is randomly chosen from 1 to 10. Probability it is even?
   Answer: 5/10 = 1/2
2. A card is drawn from a deck. Find probability of getting a king.
   Answer: 4/52 = 1/13

3. What is the probability of getting a multiple of 3 when rolling a dice?
   Answer: {3,6} → 2/6 = 1/3

Series Completion

1. Find the next number: 2, 4, 8, 16, ?
   Answer: 32
2. Complete the series: 5, 10, 20, 40, ?
   Answer: 80
3. What comes next: 1, 1, 2, 3, 5, ?
   Answer: 8

Pattern Recognition

1. Fill in the blank: 7, 14, 28, ?, 112
   Answer: 56
2. Identify the pattern: 1, 4, 9, 16, ?
   Answer: 25 (squares)
3. What is the missing number: 3, 6, 12, 24, ?
   Answer: 48

Missing Numbers

1. Find the missing number: 4, 9, ?, 25, 36
   Answer: 16
2. What is missing: 100, 90, ?, 70, 60
   Answer: 80
3. Find the blank: 2, 6, 12, ?, 30
   Answer: 20

Logical Deduction

1. All apples are fruits. Some fruits are sweet. Are all apples sweet?
   Answer: Not necessarily
2. If all pens are books and some books are papers, are all pens papers?
   Answer: Not necessarily
3. If some cats are dogs and all dogs are animals, are all cats animals?
   Answer: Not necessarily

Syllogisms

1. Statements: All humans are mammals. All mammals are animals. Conclusion?
   Answer: All humans are animals
2. Statements: Some birds are animals. All animals are living beings. Conclusion?
   Answer: Some birds are living beings
3. Statements: All roses are flowers. Some flowers are red. Conclusion?
   Answer: No definite conclusion

Puzzles

1. A clock shows 3:15. What is the angle between the hands?
   Answer: 7.5 degrees
2. If 3 pens cost Rs. 15, how much do 7 pens cost?
   Answer: Rs. 35
3. If A is older than B, and B is older than C, who is the oldest?
   Answer: A

Tables

1. From a table of sales data, identify the month with highest revenue.
   Answer: Depends on data
2. What is the average sales over 6 months?
   Answer: Depends on data
3. Compare growth in month 1 and month 6.
   Answer: Depends on data

Graphs & Charts

1. From a bar chart, identify the product with maximum sales.
   Answer: Depends on chart
2. From a pie chart, what percent is allocated to Product A?
   Answer: Depends on chart
3. Read a line graph to find sales in February.
   Answer: Depends on graph

Data Analysis

1. Find median of 9, 5, 3, 8, 7.
   Answer: 7 (sorted = 3,5,7,8,9)
2. What is the mode in 4, 5, 5, 6, 7?
   Answer: 5
3. Calculate standard deviation of 2, 4, 6.
   Answer: √[(4+0+4)/3] = √(8/3) ≈ 1.63

Analogies

1. Pen : Write :: Knife : ?
   Answer: Cut
2. Fire : Heat :: Ice : ?
   Answer: Cold
3. Bird : Fly :: Fish : ?
   Answer: Swim

Coding & Decoding

1. If CAT = DBU, then DOG = ?
   Answer: EPH

2. In a code, TREE is written as USFF. Write code for LEAF.
   Answer: MFBG

3. If TABLE = UBCMF, decode ZHOFRPH.
   Answer: WELCOME

Blood Relations

1. A is B's sister. B is C's brother. How is A related to C?
   Answer: Sister

2. P is Q's mother, Q is R's father. How is P related to R?
   Answer: Grandmother

3. M is N's daughter, N is O's son. How is M related to O?
   Answer: Granddaughter