Quantitative Aptitude Cheat Sheet

1. Seating Arrangements

- Linear & Circular Arrangements
- Left-Right & Clockwise-Anti-clockwise rules
- Shortcut: Count persons before & after given position

2. Series

- Arithmetic & Geometric Progression
- Number & Letter Series
- Common patterns: Squares, Cubes, Alternates

3. Percentages

- Percentage = (Value/Total) × 100
- Successive Percentage Change Formula: A + B + (AB/100)
- Converting % into fractions for easy calculations

4. Allegations and Mixtures

- Rule of Alligation: (Mean – Cheap) / (Expensive – Mean)
- Problems involving milk & water, metal alloys

5. Probability

- Probability = Favorable Outcomes / Total Outcomes
- Independent & Dependent Events
- Complement Rule: P(A) + P(A') = 1

6. Ratios and Proportion

- a:b = c:d ad = bc (Cross multiplication)
- Direct & Inverse Proportion problems
- Partnership & Sharing concept

7. Averages

- Average = (Sum of observations / Number of observations)
- Weighted Averages formula

8. Work and Time

- Work = Time × Rate
- Efficiency method: More men Less time
- LCM method for multiple workers

9. Speed, Time, and Distance

- Speed = Distance/Time
- Relative Speed: Opposite direction Add, Same direction Subtract
- Train problems, Boats & Streams

10. Geometry

- Basic formulas: Area, Perimeter, Volume
- Triangle Properties: Pythagoras theorem, Similarity
- Circle formulas: Circumference = 2πr, Area = πr²

11. Divisibility

- Rules for divisibility by 2,3,5,9,11
- Finding LCM & HCF

12. Profit and Loss

- Profit% = (Profit/Cost Price) × 100
- Successive Discounts: Use successive percentage change formula

13. Ages

- Present, Past, Future age-based problems
- Ratio-based age problems

14. Clocks and Times

- Angle between hands = |(30H - 5.5M)|
- Gain & Loss of time in faulty clocks

15. Series and Progressions

- AP: nth term = a + (n-1)d
- GP: nth term = a × r^(n-1)

- Sum of n terms in AP & GP

16. Equations

- Linear & Quadratic Equations
- Shortcut: Quadratic formula: $x = (-b \pm \sqrt{(b^2 - 4ac)}) / 2a$

17. Area, Shapes & Perimeter

- Square: Area = a^2, Perimeter = 4a
- Rectangle: Area = l × b, Perimeter = 2(l+b)
- Circle, Triangle, Trapezium formulas

18. Decimal Fractions

- Converting decimals to fractions
- Recurring decimal conversion

Quick Revision Cheat Sheet

Topic	Key Formula/Concept
Percentage	(Value/Total) × 100
Probability	Favorable / Total Outcomes
Speed	Distance / Time
Work	Time × Rate
Profit	(Profit/CP) × 100
AP nth term	a + (n-1)d
Quadratic Eq.	$x = (-b \pm \sqrt{(b^2 - 4ac)}) / 2a$
Area of Circle	πr^2

This cheat sheet helps you quickly grasp key concepts for competitive exams. Keep practicing!