# Mathematics Tricks and Shortcuts for CDS April 2026 Exam

The **Combined Defence Services (CDS) Exam** is one of the most prestigious competitive exams in India, conducted by UPSC for aspirants aiming to join the Indian Armed Forces. The **Mathematics paper in CDS April 2026** carries 100 marks with 100 questions, making it one of the most scoring yet time-consuming sections. To maximize your score, mastering **mathematics tricks and shortcuts** is crucial.

In this guide, we'll cover the best **shortcuts, tricks, and preparation strategies** to help you solve CDS-level mathematics questions quickly and accurately.

# Why Shortcuts Are Important for CDS Maths?

- **Time-saving:** With only 120 minutes for 100 questions, shortcuts save precious seconds per question.
- Accuracy boost: Using tested formulas and tricks reduces calculation errors.
- Confidence in exam hall: Knowing quick methods keeps you calm under pressure.
- **Scoring advantage:** Since maths has no sectional cutoff, high scoring in this section improves your overall selection chances.

# **Important CDS Mathematics Topics with Tricks**

#### 1. Arithmetic Shortcuts

Percentage to Fraction Conversion:

```
\circ 50% = 1/2, 33.33% = 1/3, 25% = 1/4, 20% = 1/5, 12.5% = 1/8.
```

- Helps in solving profit-loss and ratio problems instantly.
- Simple Interest (SI) & Compound Interest (CI):
  - $\circ$  SI = (P × R × T) / 100.
  - For Cl of 2 years =  $P[(1 + R/100)^2 1]$ .
  - Shortcut: Difference between CI and SI (2 years) =  $P \times (R^2/10000)$ .

## 2. Algebra Tricks

## • Squares of Numbers Ending with 5:

• Example: 
$$75^2 = (7 \times 8) \mid 25 = 5625$$
.

#### Cube Shortcut:

$$\circ$$
 (a + b)<sup>3</sup> = a<sup>3</sup> + b<sup>3</sup> + 3ab(a+b).

Great for expansion-based problems.

#### Common Identities:

$$\circ$$
 (a + b)<sup>2</sup> = a<sup>2</sup> + 2ab + b<sup>2</sup>.

$$\circ$$
 (a - b)<sup>2</sup> = a<sup>2</sup> - 2ab + b<sup>2</sup>.

$$\circ$$
 a<sup>2</sup> - b<sup>2</sup> = (a + b)(a - b).

## 3. Geometry and Mensuration

### Area of Right-Angled Triangle:

• Area = 
$$(1/2) \times base \times height$$
.

#### • Circle Shortcut:

• Circumference = 
$$2\pi r$$
, Area =  $\pi r^2$ .

• **Trick:** In equilateral triangle with side 'a'  $\rightarrow$  Height =  $(\sqrt{3}/2)a$ , Area =  $(\sqrt{3}/4)a^2$ .

# 4. Trigonometry Shortcuts

#### • Standard Values to Remember:

$$\circ$$
 sin 0° = 0, sin 30° = 1/2, sin 45° =  $\sqrt{2}/2$ , sin 60° =  $\sqrt{3}/2$ , sin 90° = 1.

#### Key Identities:

$$\circ$$
 sin<sup>2</sup> $\theta$  + cos<sup>2</sup> $\theta$  = 1.

$$\circ$$
 1 + tan<sup>2</sup> $\theta$  = sec<sup>2</sup> $\theta$ .

#### Shortcut for Heights & Distances:

• Use  $\tan \theta = \text{perpendicular/base}$  and  $\cot \theta = \text{base/perpendicular}$ .

## 5. Speed, Time, and Distance

- **Shortcut Relation:** Speed = Distance ÷ Time.
- Conversions:
  - $\circ$  1 km/hr = 5/18 m/s, 1 m/s = 18/5 km/hr.
- Relative Speed Trick:
  - If moving in the same direction = (S1 S2).
  - If opposite direction = (S1 + S2).

## 6. Number System Shortcuts

- Divisibility Rules:
  - Divisible by 3 → Sum of digits divisible by 3.
  - Divisible by 11 → Difference of odd-even place digits divisible by 11.
- HCF and LCM Shortcut:
  - Product of two numbers = HCF × LCM.

# **Proven Strategies for CDS Maths 2026**

- 1. Practice Previous Year Papers: Helps in understanding question patterns.
- 2. **Time-Bound Practice:** Use a stopwatch for speed enhancement.
- 3. **Memorize Squares & Cubes:** Learn up to 30 for quick calculations.
- 4. **Formula Chart:** Keep a one-page formula sheet for revision.
- 5. **Mock Tests:** Attempt at least 2–3 mock tests weekly.

# Why Choose Victor Growth for CDS Preparation?

At **Victor Growth**, we provide:

- Expert faculty specializing in CDS Mathematics tricks and shortcuts.
- Exclusive **shortcuts handbooks** for quick revision.

- Regular mock tests and doubt-solving sessions.
- Personalized mentorship to help aspirants clear CDS in the first attempt.

If you're serious about cracking CDS April 2026, **Victor Growth** is your trusted partner for success.

# **FAQs on CDS Mathematics Tricks & Shortcuts**

## Q1. How many questions are asked in CDS Maths?

Ans: There are **100 questions carrying 100 marks** in the Mathematics paper.

#### Q2. Are shortcuts enough to clear CDS Maths?

Ans: Shortcuts help save time, but regular practice and conceptual clarity are equally important.

#### Q3. Which book is best for CDS Maths shortcuts?

Ans: Books like **R.S. Aggarwal's Quantitative Aptitude** and **Pathfinder for CDS** cover shortcuts well, but joining **Victor Growth coaching** ensures structured learning.

## Q4. Can I crack CDS Maths without coaching?

Ans: Yes, but with the right guidance from institutes like **Victor Growth**, you can save time and increase your accuracy.

### Q5. How much time should I devote daily for CDS Maths?

Ans: Ideally, **2-3 hours daily** with a focus on problem-solving and revision of formulas.

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