

S.K.R Govt Degree College And

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class :- IIIrd year

Group :- BSc(M.P.es)

Topic :- FAST MATHS

Study mini Project : 2020-2021

10 FAST MATHS TRICKS And Shortcuts

Today I am going to summarize all the maths maths tricks that will speed up your calculation speed. I used them in CAT and IBPS exam. I am sure that these tricks will help you increase your score. I have wrote many articles in detail on these topics. Click on respective links to to get details.

List of Cool Maths Tricks

Squaring :-

In this simple trick we need to modify the equation and make the units digits zero. After all it is easy to multiply when units digit is zero

For example - Find squaring of 143

$$= (43+3) \times (43-3) + (3 \times 3)$$

$$= (46 \times 40) + 9$$

$$= (460 \times 4) + 9$$

$$= 1840 + 9 = 1849$$

Multiplication :-

Vedic maths gave us the easiest method to do complex multiplications quickly. This method can be quick explained with an example

Multiply 62 with 32

Step 1

$$\begin{array}{r} 62 \\ 32 \\ \hline 4 \end{array}$$

Step 2

$$\begin{array}{r} 62 \\ 32 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 2 \times 3 = 6 \\ 6 \times 2 = 12 \\ \hline 18 \end{array}$$

Step 3

$$\begin{array}{r} 62 \\ 32 \\ \hline 1984 \end{array}$$

$$\begin{array}{r} 6 \times 3 = 18 \\ \hline 19 \end{array}$$

Detailed post on Multiplication technique (Multiplication of 3 digit numbers)

Multiplication with 5 :-

Simply multiply the number by 10 and then divided it by 2

For example $99 \times 5 = 990 / 2 = 495$

Multiplication with 4

Multiplication with 9

Multiplication with 6

Multiplication with 99 :-

Multiply the number with 100 and then minus same number from the result Let's take an example

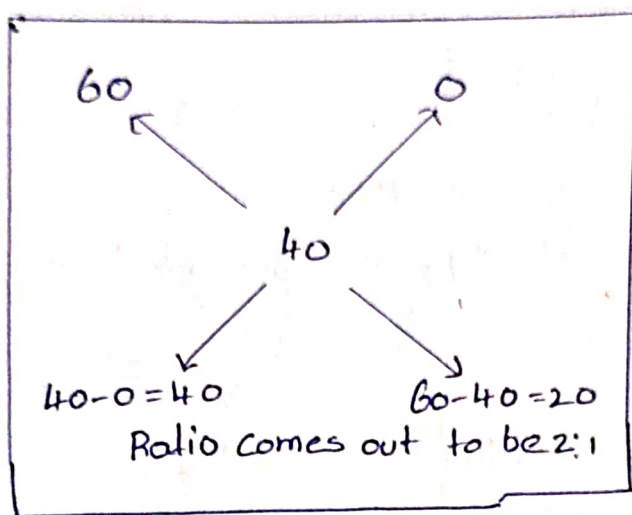
Multiply $32 \times 99 = 3200 - 32 = 3168$

Mixture :-

Questions related to mixtures can be easily solved by alligation method. By using alligation we can wide arrange of maths questions. Let me explain this with a simple example

Example

price of wine of \$60 per liter. if samuel is adding water with and selling the mixture for \$40 per liter. profit margin remains same. what is the ratio of water and wine in the mixture



Detailed post on Alligation method (Application on various types of questions)

Square root :-

Best method to find square root of large numbers is by dividing the number into parts. Let's take an example

Find square $\sqrt{1936}$

$$\sqrt{1936} = \sqrt{4} \times \sqrt{484} = \sqrt{4} \times \sqrt{4} \times \sqrt{121} = 2 \times 2 \times 11 = 44$$

Simplification Techniques PDF

Time and work :-

Every question in in time and work chapter can be solved easily by finding efficiency of workers or subject (such as pipes).

For example - A takes 10 days to complete a job. B takes 20 days to complete the same job. In how many days they will complete the job if they work together?

A's efficiency = $100/10 = 10\%$ per day

B's efficiency = $100/20 = 5\%$ per days

A and B can do 15% of the work in a day if they work together. So they can do the whole job in $100/15 = 6.66$ days or 6 days and 18 hours.

Detailed post on (Time and work chapter practice questions)

Profit and Loss :-

In case of profit

25% of cost price ($1/4$ of CP) = 20% of selling price ($1/5$ of SP)

similarly $1/3$ of CP = $1/2$ of SP

In case of loss

25% of selling price ($\frac{1}{4}$ of SP) = 20% of cost price ($\frac{1}{5}$ of CP)

similarly $\frac{1}{3}$ of SP = $\frac{1}{2}$ of CP

Estimation :-

That's the most important technique. This is not a secret that every successful candidate is using this technique during exams.

Example - 112×92

Simple $112 \times 9 = 1008$

Add a zero 10080 and then add 224 to 10080

Answer is 10304

You need to do all the calculations in your brain. Don't use paper. You need to divide complex calculations in parts and solve it in your brain without paper. That's how toppers do complex calculations during exams.

Right now it will be difficult for you to use this method but with practice, you will be able to do any complicated calculation within seconds.