Why Vedic Mathematics?

Many Indian Secondary School students consider Mathematics a very difficult subject. Some students encounter difficulty with basic arithmetical operations. Some students feel it difficult to manipulate symbols and balance equations. In other words, abstract and logical reasoning is their hurdle. Many such difficulties in learning Mathematics enter into a long list if prepared by an experienced teacher of Mathematics. Volumes have been written on the diagnosis of 'learning difficulties' related to Mathematics and remedial techniques. Learning Mathematics is an unpleasant experience to some students mainly because it involves mental exercise. To reduce all these hurdles and make the learning process of mathematics enjoyable, Vedic mathematics is needed.

Squares of numbers ending in 5:

For the number 25, the last digit is 5 and the 'previous' digit is 2. Hence, Consider

the example 25^2.

Here the number is 25. We have to find out the square of the number.

'one more than the previous one', that is, 2+1=3. The Sutra, in this context, gives the procedure 'to multiply the previous digit 2 by one more than itself, that is, by 3'.

It becomes the L.H.S (left hand side) of the result, that is, 2 X 3 = 6.
The R.H.S (right hand side) of the result is52, that is, 25. Thus 25^2 = 2
X 3 / 25 = 625.

In the same way,
35^2= 3 X (3+1) /25 = 3 X 4/ 25 = 1225;
65^2= 6 X 7 / 25 = 4225;

Square a number

Rules:
Rule 1 : Find the base of given number. That is maybe, 10, 100, 1000, 10000, ...
Rule 2 : Find the difference between base and a given number. That is a deficiency value.
Rule 3 : Subtract the given number by deficiency and then multiply by base.
Rule 4 : Square the deficiency value.
Rule 5 : Add rule 3 result with the rule 4 result. Its a final result.

Example: 93 X 93

Rule 1 : 93 base is 100
Rule 2 : 100 - 93 = 7
Rule 3 : (93 - 7) X 100 = 86 X 100 = 8600
Rule 4 : 7 X 7 = 49
Rule 5 : = 8600 + 49 = 8649
93 X 93 = 8649

Multiplication of two 2 digit numbers.

Vedic Mathematics offers various ways of multiplication two numbers .

1 Method

Find the product 14 X 12
i) The right hand most digit of the multiplicand, the first number (14) i.e.,4 is multiplied by the right hand most digit of the multiplier, the

second number (12) i.e., 2. The product 4 X 2 = 8 forms the right hand

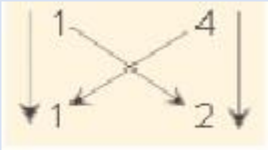
most part of the answer.

ii) Now, diagonally multiply the first digit of the multiplicand (14) i.e., 4 and second digit of the multiplier (12)i.e., 1 (answer 4 X 1=4); then multiply the second digit of the multiplicand i.e.,1 and first digit of the multiplier i.e., 2(answer 1 X 2 = 2); add these two i.e.,4 + 2 = 6. It gives the next, i.e., second digit of the answer. Hence second digit of the answer is 6.

iii) Now, multiply the second digit of the multiplicand i.e., 1 and second digit of the multiplier i.e., 1 vertically, i.e., 1 X 1 = 1. It gives the left hand most part of the answer.

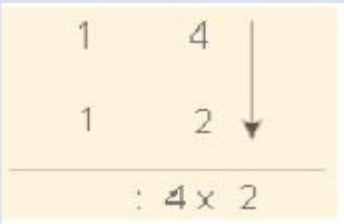
Thus the answer is 16 8.

Symbolically we can represent the process as follows :

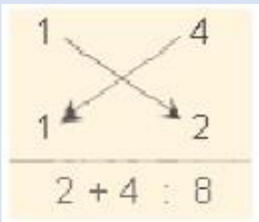


The symbols are operated from right to left .

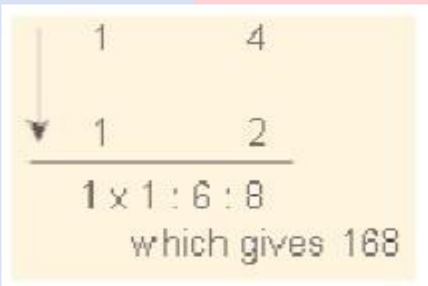
Step i)



Step ii)



Step iii)



Now in the same process, answer can be written as

23

13

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2 : 6 + 3 : 9 = 299 (Recall the 3 steps)

Method 2

This method is used specifically to multiply numbers in which any number is multiplied by 9,99,999....

Rules

1) Write one less than the multiplicand. 2) Write the deficiency of multiplicand.

Multiply 58 by 99

58 x 99 = (58-1)(100-58)

= 57 42

= 5742

Method 3

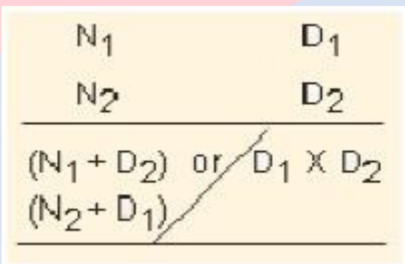
The formula can be very effectively applied in multiplication of numbers, which are nearer to bases like 10, 100, 1000i.e., to the powers of 10 . The numbers taken can be either less or more than the base considered. The difference between the number and the base is termed as deviation.

Deviation may be positive or negative. Positive deviation is written without the positive sign and the negative deviation, is written using a negative sign.

Now observe the following table.

Number	Base	Number – Base	Deviation
14	10	14 – 10	4
8	10	8 - 10	-2
97	100	97 – 100	-03
112	100	112 – 100	12
993	1000	993 – 1000	-007

The general form of the multiplication under can be shown as follows : Let N1 and N2 be two numbers near to a given base in powers of 10, andD1 and D2 are their respective deviations from the base. Then N1 X N2 can be represented as



Case (i) Both the numbers are lower than the base.

Ex. 1: Find 97 X 94. Here base is 100. Now following the rules, the working is as follows:

$$\begin{array}{ll} 97 & \overline{03} \\ 94 & \overline{06} \\ \hline (97 - 06) \text{ or } (94 - 03) \;/\; & 3 \times 6 \\ \hline \end{array}$$

97 x 94 = 9118.

Ex. 2: 98 X 97 Base is 100.

$$\begin{array}{ll} 98 & \overline{02} \\ 97 & \overline{03} \\ \hline (98 - 03) \text{ or } (97 - 02) \;/\; & 2 \times 3 \\ \hline \end{array}$$

98 x 97 = 9506

Ex. 3: 994X988. Base is 1000.

$$\begin{array}{lll} 994 & \overline{006} & \\ 988 & \overline{012} & \\ \hline (994 - 12) \text{ or } (988 - 06) \;/\; & 6 \times 12 & = 982/072 \text{ (rule-f)} \\ & & = 982072 \\ \hline \end{array}$$

Make sure that no. Of digits in the multiplication of the deviations is equal to the no. Zeroes in the base.

Case (ii) : Both the numbers are higher than the base.

The method and rules follow as they are. The only difference is the positive deviation. Instead of cross – subtract, we follow cross – add.

Ex. 4: 13X12. Base is 10

$$\begin{array}{lll} 13 & 03 & \\ 12 & 02 & \\ \hline (13 + 02) \text{ or } (12 + 03) \;/\; & 3 \times 2 & = 15/6 = 156 \\ \hline \end{array}$$

Case (iii): One number is more and the other is less than the base.

In this situation one deviation is positive and the other is negative. So the product of deviations becomes negative. So the right hand side of the answer obtained will therefore have to be subtracted. To have a clear representation and understanding a vinculum is used. It proceeds into normalization. Ex.11: 13X7. Base is 10

13	3
07	-3
10	3(-3) = -9

As the base is 10 . So, 10-9= 1

So , 13 x 7 = 91

Ex. 5: 108 X 94. Base is 100.

108	08
94	$\overline{06}$
(108 - 06) or (94 +08)	$8 \times \overline{6}$

$= 102 / \overline{48} = 10152$ (Since the complement of 48 is 52 - base 10)

Ex. 6: 998 X 1025. Base is 1000.

998	$\overline{002}$
1025	$\overline{025}$
(998 - 25) or (1025 + 2)	$\overline{2} \times 25$

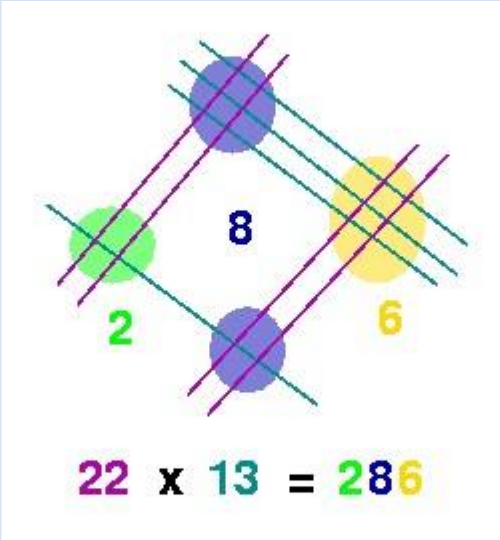
$= 1023 / \overline{050} = 1022950$ (Since the complement of 50 is 950 for the base 1000

Method 4 :- Visual multiplication with Lines

Here's a way to multiply numbers visually!

Suppose you want to multiply 22 by 13. Draw 2 lines slanted upward to the right, and then move downward to the right a short distance and draw another 2 lines upward to the right (see the magenta lines in Figure 1). Then draw 1 line slanted downward to the right, and then move upward to the right a short distance and draw another 3 lines slanted downward to the right (the cyan lines in Figure 1).

Now count up the number of intersection points in each corner of the figure. The number of intersection points at left (green-shaded region) will be the first digit of the answer. Sum the number of intersection points at the top and bottom of the square (in the blue-shaded region); this will be the middle digit of the answer. The number of intersection points at right (in the yellow-shaded region) will be the last digit of the answer.



This will work to multiply any two two-digit numbers, but if any of the green, blue, gold sums have 10 or more points in them, be sure to carry the tens digit to the left, just as you would if you were adding.

The Math Behind the Fact:

The method works because the number of lines are like placeholders (at powers of 10: 1, 10, 100, etc.), and the number of dots at each intersection is a product of the number of lines. You are then summing up all the products that are coefficients of the same power of 10. Thus the in the example

22 x 13 = (2*10 + 2) * (1*10 + 3) = 2*1*100 + 2*3*10 + 2*1*10 + 2*3 = 286.

The diagram displays this multiplication visually. In the green-shaded region there are 2*1=2 dots. In the blue-shaded region there are 2*3+2*1=8 dots. In the gold-shaded region there are 2*3=6 dots. This method does exactly what you would do if you wrote out the multiplication the long way and added the columns!

The method can be generalized to products of three-digit numbers (or more) using more sets of lines (and summing the dot groupings vertically and remembering to carry when needed). It can also be generalized to products of three-numbers using cubes of lines rather than squares! (Of course, it gets pretty unwieldy to use the method at that point.)

METHOD 5 :-

To multiply three digit numbers
Consider the following example 124 X
132.
Proceeding from right to left

i) 4 X 2 = 8. First digit = 8

ii) (2 X 2) + (3 X 4) = 4 + 12 = 16. The digit 6 is retained and 1 is carried over to left side. Second digit = 6.

iii) (1 X 2) + (2 X 3) + (1 X 4) = 2 + 6 + 4 =12. The carried over 1 of above step is added i.e., 12 + 1 = 13. Now 3 is retained and 1 is carried over to left side. Thus third digit = 3

iv) (1X 3) + (2 X 1) = 3 + 2 = 5. the carried over 1 of above step is added i.e., 5 + 1 = 6 . It is retained. Thus fourth digit = 6.

v) (1 X 1) = 1. As there is no carried over number from the previous step it is retained. Thus fifth digit = 1 124 X 132 = 16368.

Let us work another problem by placing the carried over digits under the first row and proceed.

234 x
316

61724
1222

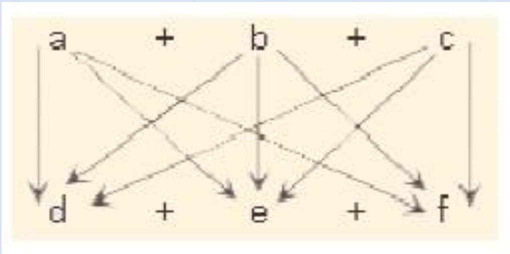
73944

i) 4 X 6 = 24 : 2, the carried over digit is placed below the second digit.

ii) (3 X 6) + (4 x 1) = 18 + 4 = 22 ; 2, the carried over digit is placed below third digit.

iii) (2 X 6) + (3 X 1) + (4 X 3) = 12 + 3 + 12 = 27 ; 2, the carried over digit is placed below fourth digit.

iv) (2 X 1) + (3 X 3) = 2 + 9 = 11; 1, the carried over digit is placed below fifth digit.
v) (2 X 3) = 6.
vi) Respective digits are added.



METHOD 6 :-

To find the square of any number irrespective of its deficiency. I t is specifically useful for finding squares of number nearer to 10,100,1000 etc.

Rule 1:- Find the deficiency of the number.

Rule 2 :- The right hand side of the answer is the square of deficiency. Rule 3 :- To find the left side of the answer subtract the deficiency from the number.

Ex.1. $(96)^2$

100-96 = 4

$(4)^2 = 16$

96-4 =92

So, $(96)^2 = 9216$

Ex.2. $(114)^2$

100-114 = -14

$(-14)^2 = 196$ (3 digits)

Here the right part has three digits, one more than the no. Zeroes in the working base, so 1 is carry over.

114-(-14) +1 = 128 + 1

= 129

So, $(114)^2 = 12996$

Ex.3 $(9991)^2$

Working base of 9991 is 10000

Deficiency = 10000-9991

= 09

$(09)^2=81$

As the working base contains 4 zeroes , so right hand side of the answer is 0081.

Now , 9991-9 = 9982

So , $(9991)^2$= 99820081.

2.CUBING

Take a two digit number say 14.

i) Find the ratio of the two digits i.e. 1:4

ii) Now write the cube of the first digit of the number i.e. 1^3

iii) Now write numbers in a row of 4 terms in such a way that the first one is the cube of the first digit and remaining three are obtained in a geometric progression with common ratio as the ratio of the original two digits (i.e. 1:4) i.e. the row is 1 4 16 64.

iv) Write twice the values of 2nd and 3rd terms under the terms respectively in second row.

i.e., 1 4 16 64

8 32 (2 x 4 = 8, 2 x 16 = 32)

v) Add the numbers column wise and follow carry over process.

1 4 16 64 Since 16 + 32 + 6 (carryover) = 54

Now

8 32 4 written and 5 (carryover) + 4 + 8 = 17

2 7 4 4 7 written and 1 (carryover) + 1 = 2.

This 2744 is nothing but the cube of the number 14

i)	1:8				
i)& iii)	**1**	8	64	512	
iv)	**1**	8	64	512	(2X8 =16, 2X64 = 128)
		16	128		
v)	1	8	64	512	51 2
		16	128		64 + 128 + 51 = 24 3
	5	8	3	2	8+16+24 = **4** 8
					1 + 4 = 5

i.e.,183 = 5832.

Example 2: Find 33^3

I)	3 : 3 = 1 : 1				[$3^3 = 27$ ratio is 1 : 1]
ii) & iii)	27	27	27	27	
iv)& (v)	27	27	27	27	(2x27=54)
		54	**54**		
	35	9	3	7	

2 7

27 + 54 + 2 = 8 3

Thus 33^3 = 35937   27 + 54 + 8 = 8 9

27 + 8 = 35

Find the cubes of the following numbers using Vedic sutras.

103, 112, 91, 89, 998, 9992, 1014.

To divide the numbers by 9

Consider some two digit numbers (dividends) and same divisor 9. Observe the following example.

i) 13 ÷ 9 The quotient (Q) is 1, Remainder (R) is 4.

Since 9) 13 (1

9

______

4

ii) 34 ÷ 9, Q is 3, R is 7. iii) 60 ÷ 9, Q is 6, R is 6. iv) 80 ÷ 9, Q is 8, R is 8.

Now we have another type of representation for the above examples as given here under:

i) Split each dividend into a left hand part for the Quotient and right - hand part for the remainder by a slant line or slash.

Eg. 13 as 1 / 3, 34 as 3 / 4 , 80 as 8 / 0.

ii) Leave some space below such representation, draw a horizontal line.

Eg. 1 / 3 3 / 4 8 / 0

______ , ______ , ______

iii) Put the first digit of the dividend as it is under the horizontal line. Put the same digit under the right hand part for the remainder, add the two and place the sum i.e., sums of the digits of the numbers as the remainder.

Eg. 1 / 3 3 / 4 8 / 0

1 3 8

1 / 4 3 / 7 8 / 8 Now the problem is over. i.e.,

13 ÷ 9 gives Q = 1, R = 4

34 ÷ 9 gives Q = 3, R = 7

80 ÷ 9 gives Q = 8, R = 8

Proceeding for some more of the two digit number division by 9, we get

a) 21 ÷ 9 as 9) 2 / 1

i.e. Q=2, R=3 2

____

2 / 3

b) 43 ÷ 9 as 9) 4 / 3

i.e. Q = 4, R = 7. 4

____

4 / 7

The examples given so far convey that in the division of two digit numbers by 9, we can mechanically take the first digit down for the quotient – column and that, by adding the quotient to the second digit, we can get the remainder.

Now in the case of 3 digit numbers, let us proceed as follows.

i) 9) 104 (11 9) 10 / 4

99 1 / 1

__________ __________

5 11 / 5

ii) 9) 212 (23 9) 21 / 2 207

2 / 3

__________ __________

5 23 / 5

Note that the remainder is the sum of the digits of the dividend. The first digit of the dividend from left is added mechanically to the second digit of the dividend to obtain the second digit of the quotient. This digit added to the third digit sets the remainder. The first digit of the dividend remains as the first digit of the quotient.

Consider 511 ÷ 9

Add the first digit 5 to second digit 1 getting 5 + 1 = 6. Hence Quotient is 56. Now second digit of 56 i.e., 6 is added to third digit 1 of dividend to get the remainder i.e., 1 + 6 = 7

Thus 9) 51 / 1

5 / 6

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56 / 7 Q is 56, R is 7.

Extending the same principle even to bigger numbers of still more digits, we can get the results.

Eg : 1204 ÷ 9

i) Add first digit 1 to the second digit 2. 1 + 2 = 3

ii) Add the second digit of quotient 13. i.e., 3 to third digit '0' and obtain the Quotient. 3 + 0 = 3, 133

iii) Add the third digit of Quotient 133 i.e.,3 to last digit '4' of the dividend and write the final Quotient and Remainder. R = 3 + 4 = 7, Q = 133

In symbolic form 9) 120 / 4

13 / 3

133 / 7

Another example. 9) 13210 / 1 132101 ÷ 9

gives 1467 / 7 Q = 14677, R = 8

14677 / 8

In all the cases mentioned above, the remainder is less than the divisor. What about the case when the remainder is equal or greater than the divisor?

Eg. 9) 3 / 6 9) 24 / 6

3 2 / 6

3 / 9 (equal) 26 / 12 (greater)

We proceed by re-dividing the remainder by 9, carrying over this Quotient to the quotient side and retaining the final remainder in the remainder side.

9) 3 / 6 9) 24 / 6

/ 3 2 / 6

3 / 9 26 / 12

4 / 0 27 / 3

Q = 4, R = 0 Q = 27, R = 3.

When the remainder is greater than divisor, it can also be represented as

9) 24 / 6

2 / 6

26 / 1 / 2

/ 1

1 / 3

27 / 3

Fast Maths Tricks and Shortcuts

Squaring

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

For example - Find square of 43

= (43+3) × (43-3) + (3×3)

=(46×40) + 9

= (460×4) + 9

= 1840 + 9 = 1849

Squaring

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For example - Find square of 43

= (43+3) × (43-3) + (3×3)

=(46×40) + 9

= (460×4) + 9

= 1840 + 9 = 1849

Multiplication Multiplication with 5

Simply multiply the number by 10 and then divide it by 2.

For example 99×5= 990/2= 495

Multiplication with 99

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

Multiply 32×99 = 3200 - 32 = 3168

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 √ 1936

√ 1936 = √ 4 × √ 484 = √ 4 × √ 4 × √ 121 = 2×2×11 = 44

Simplification Techniques PDF

Time and Work

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.

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

Simply 112 × 9 = 1008

Add a zero 10080 and then add 224 to 10080.

Answer is 10304

Multiplying with 11

How do you multiply a number with 11? Let us take an example. Say you have to multiply 35 with 11. Just follow these 3 steps given below.

1. Write 35 as 3( )5 (where ( ) is a space for a new digit that will be inserted in the middle)
2. Find the middle digit as 3 (3+5) 5. The middle digit is the sum of first 2 digits
3. The number is 385. As simple and as fast as that.

But what if the sum of first 2 digits if more than 9 i.e. a 2 digit number? Let us take an example again. Say the number is 59 that has to multiplied with 11 ○ Write 59 as 5( )9 ○ Find the middle digit as 5(5+9)9 = 5(14)9. Since the middle digit is not actually a digit but a 2 digit number, so add 10 to first digit and retain 4 in the middle ○ The number is 5+1 (4) 9 = 649. As fast as that

To multiply 52 and 11,imagine there is a space between 52

52*11= 5_2 (Put an imaginary space in between)

Now, what to do with that space?

Just add 5 and 2 and put the result in the imaginary space

So, 52 * 11 =572 (which is your answer)

Let's try some more examples:

1) **35 * 11 = 3 (3+5) 5 = 385**

2) **81 * 11 = 8 (8+1) 1 = 891**

3) **72 * 11 = 7 (7+2) 2 = 792 etc..**

Here are few more mental maths tricks..

Multiply any large number by 12 mentally in seconds

To multiply any number by 12 just double last digit and thereafter double each digit and add it to its neighbour

For example **21314 * 12 = 255768**

Lets break it into simple steps:

Step 1: 021314 * 12 = ______8 (Double of Last Digit 4= 8)

Step 2: 021314 * 12 = _____68 (Now Double 1= 2, and add it to 4, 2+4=6)

Step 3: 021314 * 12= ___768 (Now Double 3=6, and add it to 1, 6+1=7)

Step 4: 021314 * 12= __5768 (Now Double 1=2, and add it to 3, 2+3=5)

Step 5: 021314 * 12= _55768 (Now Double 2=4, and add it to 1, 4+1=5)

Step 6: 021314 * 12= 255768 (Now Double 0=0, and add it to 2, 0+2=2)
So your final answer of **21314 * 12 = 255768**

Another example...

Calculating Square of numbers quickly...

Lets **calculate the square of 54**

So **(54)^2** = 5^2 +4 -- 4^2 = 25 +4 ----16 =29-------16= **2916**

Similarly **(55)^2** = 5^2 +5 --5^2=25+5------25=30---------25= **3025**

Similarly **(56)^2** = 5^2 + 6--6^2=25+6------36= 31--------36= **3136** etc..

Power multiplication or square of a number that ends in 5

Here the speed would really amaze you. Try finding the square of 85 in your mind. How much time did it take to you? Now try this fast math trick here.

1. Ignore 5 in the units place
2. Take the digit in the tens place i.e. 8 and multiply it with its successor i.e. 8+1 = 9. The result is 72
3. Simply place 25 at the end of the result i.e. 7225. That's it. 7225 is the square of 85. That is your answer.

Multiplying with 5

To multiply any number with 5 is same as multiplying it with 10 and dividing it by 2. We can use this rule to speed up our multiplication with 5. So here is the trick. Say you want to multiply 236 with 5. 1. Divide the number by 2 i.e. 118

2. Now add 0 at the end. The answer is 1180

Was that fast math or what! But wait, what if the answer is in decimal? The rule still holds. Try and multiply 1305 with 5

1. Divide the number by 2 i.e. 652.5
2. Now multiply it by 10 i.e. 6525. This is same as adding a 0 at the end or moving a decimal point one step to the right.

Multiplying with 9

Suppose you want to multiply a number by 9, is there a fast way? Well, there is something that will help when you are dealing with large numbers and especially if you are fast with subtraction. Say you have to multiply 81 with 9.

1. At 0 at the end of the number i.e. 810
2. Subtract original number from the new number i.e. 810 - 81 = 729

This rule works every time. The only thing is that it gets a little cumbersome when you are dealing with mid sized numbers say a 4 digit number or so. But this math trick will still make multiplication with 9 faster and less error prone for most of us. So that was our fast math trick for multiplication with 9

Multiplying with 25

What if you have you to multiply a two digit number with 25. Say you have to multiply 57 with 25. Can you do the math fast? Can you do it in your head without reaching out for a pen and paper? We teach you the fast math trick to do this calculation in your head

1. Add two 0 at the end of the number i.e. 5700
2. Now find the half of this number i.e. divide it by 2. So you get 2850
3. Divide it again by 2 i.e. get its half. 1425. This is your answer. i.e. 1425 is the product of 57 and 25. Don't believe me, check your calculator.

This will work for large numbers too and will be as effective. So try it with 185. Find the product of 185 and 25

1. Add two 0s at the end. So 18500
2. Now divide it by 2. So you get 9250
3. Divide it again by 2. So you get 4625. That is your answer.

Quick and can be easily done in your head. So that was another fast math trick. Hungry to find more ways to speed up your arithmetic calculations? Keep reading.

Divide by 5

Enough of multiplication tricks. What if you have to divide by 5. Say you want to divide 565 by 5. Just follow this 2 step math trick. 1. Double the number i.e. multiply it by 2. So you get 1130

2. Now move decimal point one step to the left i.e. reduce one 0. So the answer is 113.

This works with any number, even decimal numbers. So try it with 142.3

1. Double up the number. So you get 284.6
2. Now move the decimal point to the left by 1 position. So you get 28.46. That is your answer

Subtracting from 1000

What if you have to subtract a number from 1000? Say the number is 739. There are a lot of carry overs involved and so it is not really that easy to do it in your head. But may be this nifty little math trick will help to speed up your calculations and accuracy. Try and tell me if it was fast for you.

1. Subtract the digits in units position from 10 and subtract the digit in hundred's position from 9. That is your answer. So here we have 9-7, 9-3, 10-9. So the answer is 261. That is it. This is only one step.

So that was fast, one step subtraction trick. This, math trick for subtraction works for any number like 10, 100, 1000, 10000, 100000 and so on. Just subtract all the digits from 10 and the last digit i.e. the digit with largest place value from 9. That is your answer.

Multiplying by 15

What is 15? Remember, 15 is 10 + half of 10. So if you to have to multiply any number with 15, this trick or simple math rule will help improve your arithmetic computation speed. Say you have to find the product of 67 with 15.

1. Write 0 at the end of the number. Here we have 670
2. Divide this by 2. So we have 335
3. Add up the 2 numbers i.e. 335+670 = 1005

Fast addition of 2 digit numbers

What if you have to add 67 and 24. Can you do it in your head? Can you do it fast? Try this arithmetic trick and see if it helps in your calculations.

1. Add the numbers in the TENs place. i.e. 6+2 = 8
2. Now bring one of the numbers in the UNITs place behind 8. Say we bring in 7. So your number is 87.
3. Now count up from 87 by 4 i.e. the other number in the UNIT's place. So you up 4 places from 87 i.e. 88, 89, 90 and 91. 91 is your answer.

Let us try this again. Add 75 and 89.

1. Add the numbers in the TENs place. We get 7+8 = 15
2. Bring in one of the numbers in the UNITs place. We get 159.
3. Count up 5 places from 159. So the answer is 160, 161, 162, 163 and 164. Your answer is 164.

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