## INTERESTING WAY OF SQUARING ANY NUMBER

\#PowerOfVedicMath \#VedicMathTricks \#VedicMathWorld \#VMLS

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Squaring is an important operation in mathematics. If you are asked answer of (9999999999) ${ }^{2}$, how much time would you take to calculate? If you are told, 2 seconds are enough, what would be your reaction?

Well, let's start with the basics. "Square" means multiplying a number with itself i.e. $A \times A=A^{2}$. We can go for squares of any number within the fraction of a moment by knowing the technique which is given in this column.

Before you go through the SMART TRICKS explained, you need to prepare the squares from 1 to 30 . Once you know the squares of 1 to 30 , you can calculate the squares of any number within a few seconds only. It is very essential to practice squares of 1 to 30 before going for the given SMART TRICKS in this column. You can take help of the video links shared for this.

| $(1)^{2}=1$ | $(16)^{2}=256$ |
| :--- | :--- |
| $(2)^{2}=4$ | $(17)^{2}=289$ |
| $(3)^{2}=9$ | $(18)^{2}=324$ |
| $(4)^{2}=16$ | $(19)^{2}=361$ |
| $(5)^{2}=25$ | $(20)^{2}=400$ |
| $(6)^{2}=36$ | $(21)^{2}=441$ |
| $(7)^{2}=49$ | $(22)^{2}=484$ |
| $(8)^{2}=64$ | $(23)^{2}=529$ |
| $(9)^{2}=81$ | $(24)^{2}=576$ |
| $(10)^{2}=100$ | $(25)^{2}=625$ |
| $(11)^{2}=121$ | $(26)^{2}=676$ |
| $(12)^{2}=144$ | $(27)^{2}=729$ |
| $(13)^{2}=169$ | $(28)^{2}=784$ |
| $(14)^{2}=196$ | $(29)^{2}=841$ |
| $(15)^{2}=225$ | $(30)^{2}=900$ |

## SMART TRICK \#1:

## SQURES OF THE NUMBERS BETWEEN 30 TO 40

Here, we would take ' 50 ' as base. We would do the mind calculations with three simple steps:

Step 1: Find the difference from base i.e. [(Number) - (Base)]
Step 2: (25) + (difference). This makes first two digits of the answer.
Step 3: Square of a difference. This makes last two digits of the answer. If the square is of three digits, we need to keep last two digits of it which represent last two digits of the answer. The hundreds place would be carried forward.

Let's understand this more by taking a few examples:
Q: (39) ${ }^{2}$
Step 1: Find the difference from base

$$
39-50=(-11)
$$

Step 2: (25) + (difference) $25+(-11)=14$

Step 3: Square of the difference to be written in two digits
$(-11)^{2}=121$
So, it comes to 14121

Step 4:121 is of three digits and we need only two digits so first digit would be carried forward.

$$
1(4+1) 21=1521
$$

Thus, the answer comes to 1521.

## SMART TRICK \#2:

SQURES OF THE NUMBERS BETWEEN 80 TO 90
You need to just extend the idea of the above SMART
TRICK.
Here, base is 100
We would do the mind calculations with three simple steps:
Step 1: Find the difference from base i.e. [(Number) - (Base)]
Step 2: (Number itself) + (difference).
This makes first digits of the answer.
Step 3: Square of a difference. This makes last two digits of the answer. If the square is of three digits, we need to keep last two digits of it which represent last two digits of the answer. The digits at its hundredth place would be carried forward.

Let's understand this more by taking a few examples:

Q: (89) ${ }^{2}$
Step 1: Find the difference from base

$$
89-100=(-11)
$$

Step 2: (89) + (difference)

$$
89+(-11)=78
$$

Step 3: Square of the difference to be written in two digits $(-11)^{2}=121$
So, it comes to 78121
Step 4:121 is of three digits and we need only two digits so first digit would be carried forward.
$=7(8+1) 21$
$=7921$

Thus, the answer comes to 7921.

Q: (83) ${ }^{2}$
Step 1: Find the difference from base

$$
83-100=(-17)
$$

Step 2: (83) + (difference)

$$
83+(-17)=66
$$

Step 3: Square of the difference to be written in two digits

$$
(-17)^{2}=289
$$

So, it comes to 66289
Step 4:289 is of three digits and we need only two digits so first digit would be carried forward.

$$
6(6+2) 89
$$

6889
Thus, the answer comes to 6889.

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 MATH MANTRA AUGUST_2021Last date to apply 31 ${ }^{\text {st }}$ August, 2021 fill 12:00pm

## SMART TRICK \#3:

## SPECIAL CASE_1 (DEMLO NUMBERS_Paying a tribute to the great MATH TEACHER_D. R. Kaprekar)

Oh yes! You are going to love this special case. Enjoy reading it.
$(1)^{2}$
$=1$
$(11)^{2} \quad=\quad 121$
$(111)^{2} \quad=\quad 12321$
$(1111)^{2} \quad=\quad 1234321$
$(11111)^{2} \quad=\quad 123454321$
$(111111)^{2}=12345654321$

## SMART TRICK \#4:

## SPECIAL CASE_2

Special case_2 is even more interesting. Go through it and increase your knowledge quotient.
(9) ${ }^{2}$
$=$
81
$(99)^{2}=9801$
$(999)^{2}=998001$
$(9999)^{2}=99980001$
$(99999)^{2}=9999800001$
$(999999)^{2}=999998000001$

