

Hello people. I have just discovered an interesting way to find out squares of numbers. Well, its not anything magical, but its interesting and can be helpful sometimes if you can do fast addition and subtraction.

In this method, if you know the square of 20, u can find the square of 19 & 21 by simple subtraction & addition. Yap. It works this way. If you dont know the square of any number, its nothing. so, lets see an example:

$20^2 = 400$ (we all know). But what is 19^2 ? or what is 21^2 ?? finding out the square of both this numbers looks challenging to me, if I use multiplication. so, heres the trick: to find out 19^2 , subtract $(20+19)=39$ from 400. u get 361. This is the square of 19.

Similarly, to find the square of 21, add $(20+21) = 41$ to 400. its 441 and it is the square of 21.

Similarly, if we know $30^2 = 900$. We can easily find out, $29^2 = 900 - (30+29) = 841$. and $31^2 = 900 + (30+31) = 961$.. even we can stretch it to 28 and 32 as now we know the square of 29 & 31

I know its nothing super magical, but i felt very happy to figure out this relationship, which, I believe, will be very helpful sometimes..

For those of you who are interested to know how it works (some of you might have even found it out already):

Its simple algebra. If we know the square of the number x, we can find the square of number $(x+1)$ and $(x-1)$.

$(x+1)^2 = x^2 + 2x + 1 = x^2 + ((x) + (x+1))$ -- thats what we did for 21^2 when we assumed we know 20^2

$(x-1)^2 = x^2 - 2x + 1 = x^2 - ((x) + (x-1))$ -- thats what we did for 19^2 when we assumed we know 20^2

Hope it will help you sometimes..