

SQUARE ROOT OF LARGE NUMBERS

For the class- 6th to 10th

► Find out square root of a large number

e.g. 319225, 1216609

Solve- $\sqrt{319225} = \sqrt{31\ 92\ 25} =$

	565
5	31 92 25 -25
106 ×6	692 -636
1125 ×5	5625 -5625
	0000

Now understand it step by step

Step-1 First we write digits of number in pair from right to left or from digit one.

Step-2 We shall divide first pair (31) by same times same number e.g. 5×5. Here 6×6 will be more than 31 and 4×4 will be more less than 31 so the proper number will be 5.

Step-3 Pay attention on second row. In this row in 106, 10 is two times of 5 and 6 is maximum quotient number of $\frac{69}{5}$. Thus 106 will be divisor of 692. 6 is remains number and 92 is next pair. Same processor is repeating in third row. 112 is two times of 56 and 5 is maximum quotient number of $\frac{562}{112}$.

► 1216609 have odd count of digits so 1 will be single and write as following-

1 21 66 09

Divisor of 1 will be 1. Now next do self according first example.