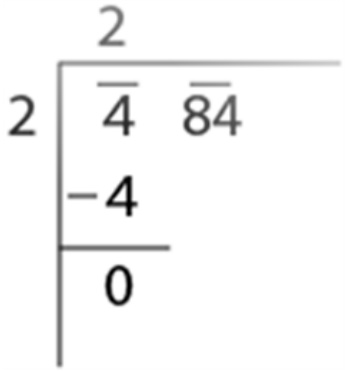
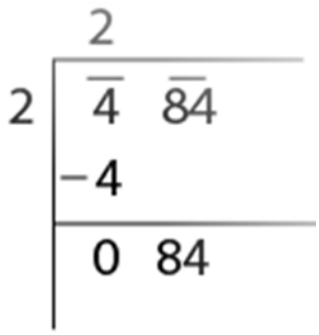
## *Square root of a number by long division method*

*Let us understand long division method with the help of an example.*

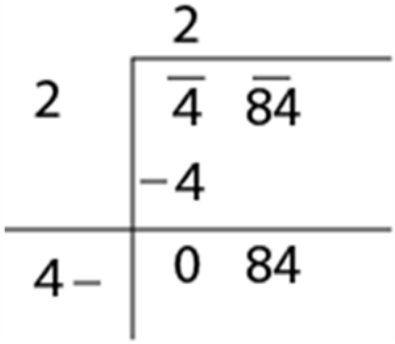
1. *Taking 484 as the number whose square root is to be evaluated. Place a bar over the pair of numbers starting from the unit place or Right-hand side of the number. In case, if we have the total number of digits as odd number, the leftmost digit will also have a bar,* $\overline{4}\ \overline{84}$.
2. *Take the largest number as the divisor whose square is less than or equal to the number on the extreme left of the number. The digit on the extreme left is the dividend. Divide and write the quotient. Here the quotient is 2 and the remainder is 0.*




3. *Next, we then bring down the number, which is under the bar, to the right side of the remainder. Here, in this case, we bring down 84. Now, 84 is our new dividend.*




4. *Now double the value of the quotient and enter it with blank space on the right side.*




5. *Next, we have to select the largest digit for the unit place of the divisor (4_) such that the new number, when multiplied by the new digit at unit's place, is equal to or less than the dividend (84).*

*In this case,* $42 \times 2 = 84$. *So the new digit is 2.*