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(Affiliated to CBSE up to +2 Level)

CLASS: VIII

SUB.: MATHS

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SQUARE ROOTS

1. Find the least number which must be added to each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained.

- (i) 525
- (ii) 1750
- (iii) 252
- (iv) 1825
- (v) 6412

Sol: (i) Since, we get a remainder 41.

$$\begin{array}{r} 22 \\ 2 \overline{) 525} \\ \underline{-4} \\ 42 \\ \underline{-84} \\ 41 \end{array}$$

i.e. $525 > 22^2$.

and next square number is 23.

∴ The required number to be added = $23^2 - 525$

$$= 529 - 525 = 4$$

Now, $525 + 4 = 529$, and $\sqrt{529} = 23$.

2. Find the least number which must be subtracted from each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained.

- (i) 402
- (ii) 1989
- (iii) 3250
- (iv) 825
- (v) 4000

Sol: (i) On proceeding to find the square root of 402, we have

Since, we get a remainder 2

The required least number to be subtracted from 402 is 2.

$$402 - 2 = 400, \text{ and } \sqrt{400} = 20$$

$$\begin{array}{r} 20 \\ 2 \overline{) 402} \\ \underline{-4} \\ 40 \\ \underline{-00} \\ 2 \end{array}$$