



6. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find the square root of the square number so obtained.

(i) 252

(ii) 2925

(iii) 396

(iv) 2645

(v) 2800

(vi) 1620

Sol: (i) 252

We have

$$\begin{array}{r|l} 2 & 252 \\ \hline 2 & 126 \\ \hline 3 & 63 \\ \hline 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$252 = 2 \times 2 \times 3 \times 3 \times 7$$
$$252 = (2 \times 2) \times (3 \times 3) \times 7$$

∴ The prime factor 7 is unpaired,

So, the given number should be divided by 7.

$$\therefore \frac{252}{7} = \frac{2 \times 2 \times 3 \times 3 \times 7}{7}$$

$$\text{or } 36 = 2 \times 2 \times 3 \times 3$$

Thus, 36 is a perfect square. and $\sqrt{36} = 2 \times 3 = 6$

Do your Self [(ii) to (vi)]

7. The students of Class VIII of a school donated Rs 2401 in all, for Prime Minister's National Relief Fund. Each student donated as many rupees as the number of students in the class. Find the number of students in the class.

Sol: Let the number of students be x

According to the question,

Each student donated Rs x .

Total amount donated by the class VIII = Rs $x \times x = \text{Rs } x^2$

Thus, $x^2 = 2401$

$$\Rightarrow x^2 = 2401$$

$$\Rightarrow x = \sqrt{2401}$$

$$\Rightarrow x = \sqrt{7 \times 7 \times 7 \times 7}$$

$$\therefore x = 7 \times 7 = 49$$

Hence, the number of students in the class = $x = 49$ **Ans.**

Do Your Self

8. 2025 plants are to be planted in a garden in such that each row contains as many plants as the number of rows. Find the number of row and the number of plants in each row.