



## Squares and Square Roots Ex 3.5 Q2

**Answer :**

(i) Using the long division method:

$$\begin{array}{r}
 48 \\
 4 \overline{) 2361} \\
 \underline{4 \phantom{00} 16} \\
 88 \phantom{00} 761 \\
 \underline{8 \phantom{00} 704} \\
 57
 \end{array}$$

We can see that 2361 is 57 more than  $47^2$ . Hence, 57 must be subtracted from 2361 to get a perfect square.

(ii) Using the long division method:

$$\begin{array}{r}
 441 \\
 4 \overline{) 194491} \\
 \underline{4 \phantom{00} 16} \\
 84 \phantom{00} 344 \\
 \underline{4 \phantom{00} 336} \\
 881 \phantom{00} 891 \\
 \underline{1 \phantom{00} 881} \\
 10
 \end{array}$$

We can see that 194491 is 10 more than  $441^2$ . Hence, 10 must be subtracted from 194491 to get a perfect square.

(iii) Using the long division method:

$$\begin{array}{r}
 162 \\
 1 \overline{) 26535} \\
 \underline{1 \phantom{00} 1} \\
 26 \phantom{00} 165 \\
 \underline{6 \phantom{00} 156} \\
 322 \phantom{00} 935 \\
 \underline{2 \phantom{00} 644} \\
 291
 \end{array}$$

We can see that 26535 is 291 more than  $162^2$ . Hence, 291 must be subtracted from 26535 to get a perfect square.

(iv) Using the long division method:

$$\begin{array}{r}
 127 \\
 1 \overline{) 16160} \\
 \underline{1 \phantom{00} 1} \\
 22 \phantom{00} 061 \\
 \underline{2 \phantom{00} 44} \\
 247 \phantom{00} 1760 \\
 \underline{7 \phantom{00} 1729} \\
 31
 \end{array}$$

We can see that 16160 is 31 more than  $127^2$ . Hence, 31 must be subtracted from 16160 to get a perfect square.

(v) Using the long division method:

$$\begin{array}{r}
 2098 \\
 2 \overline{) 4401624} \\
 \underline{2 \phantom{00} 4} \\
 40 \phantom{00} 040 \\
 \underline{0 \phantom{00} 0} \\
 409 \phantom{00} 4016 \\
 \underline{9 \phantom{00} 3681} \\
 4188 \phantom{00} 33524 \\
 \underline{8 \phantom{00} 33504} \\
 20
 \end{array}$$

We can see that 4401624 is 20 more than  $2098^2$ . Hence, 20 must be subtracted from 4401624 to get a perfect square.

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