



Squares and Square Roots Ex 3.5 Q1

**Answer :**

(i)

$$\begin{array}{r|l} & 112 \\ 1 & 12544 \\ \hline 1 & 1 \\ \hline 21 & 025 \\ 1 & 21 \\ \hline 222 & 444 \\ 2 & 444 \\ \hline & 0 \end{array}$$

Hence, the square root of 12544 is 112.

(ii)

$$\begin{array}{r|l} & 312 \\ 3 & 97344 \\ \hline 3 & 9 \\ \hline 61 & 073 \\ 1 & 61 \\ \hline 622 & 1244 \\ 2 & 1244 \\ \hline & 0 \end{array}$$

Hence, the square root of 97344 is 312.

(iii)

$$\begin{array}{r} 535 \\ 5 \overline{) 286225} \\ \underline{5} \phantom{225} \\ 103 \phantom{25} \\ \underline{3} \phantom{25} \\ 1065 \phantom{25} \\ \underline{5} \phantom{25} \\ 0 \end{array}$$

Hence, the square root of 286225 is 535.

(iv)

$$\begin{array}{r} 625 \\ 6 \overline{) 390625} \\ \underline{6} \phantom{25} \\ 122 \phantom{25} \\ \underline{2} \phantom{25} \\ 1245 \phantom{25} \\ \underline{5} \phantom{25} \\ 0 \end{array}$$

Hence, the square root of 390625 is 625.

(v)

$$\begin{array}{r} 603 \\ 6 \overline{) 363609} \\ \underline{6 \phantom{00} 36} \phantom{09} \\ 1203 \phantom{00} 03609 \\ \underline{3 \phantom{00} 3609} \\ 0 \end{array}$$

Hence, the square root of 363609 is 603.

(vi)

$$\begin{array}{r} 987 \\ 9 \overline{) 974169} \\ \underline{9 \phantom{00} 81} \phantom{69} \\ 188 \phantom{00} 1641 \\ \underline{8 \phantom{00} 1504} \phantom{69} \\ 1967 \phantom{00} 13769 \\ \underline{7 \phantom{00} 13769} \\ 0 \end{array}$$

Hence, the square root of 974169 is 987.

(vii)

$$\begin{array}{r} 347 \\ 3 \overline{) 120409} \\ \underline{3} \phantom{00} 9 \phantom{00} \\ 64 \phantom{00} 304 \phantom{00} \\ \underline{4} \phantom{00} 256 \phantom{00} \\ 687 \phantom{00} 4809 \phantom{00} \\ \underline{7} \phantom{00} 4809 \phantom{00} \\ \phantom{00} 0 \end{array}$$

Hence, the square root of 120409 is 347.

(viii)

$$\begin{array}{r} 1213 \\ 1 \overline{) 1471369} \\ \underline{1} \phantom{00} 1 \phantom{00} \\ 22 \phantom{00} 047 \phantom{00} \\ \underline{2} \phantom{00} 44 \phantom{00} \\ 241 \phantom{00} 313 \phantom{00} \\ \underline{1} \phantom{00} 241 \phantom{00} \\ 2423 \phantom{00} 7269 \phantom{00} \\ \underline{3} \phantom{00} 7269 \phantom{00} \\ \phantom{00} 0 \end{array}$$

Hence, the square root of 1471369 is 1213.

(ix)

$$\begin{array}{r|l} 540 & \\ \hline 5 & 291600 \\ 5 & 25 \\ \hline 104 & 416 \\ 4 & 416 \\ \hline 1080 & 000 \\ 0 & 00 \\ \hline & 0 \end{array}$$

Hence, the square root of 291600 is 540.

(x)

$$\begin{array}{r|l} 3107 & \\ \hline 3 & 9653449 \\ 3 & 9 \\ \hline 61 & 065 \\ 1 & 61 \\ \hline 6207 & 43449 \\ 7 & 43449 \\ \hline & 0 \end{array}$$

Hence, the square root of 9653449 is 3107.

(xi)

$$\begin{array}{r} 1321 \\ 1 \overline{) 1745041} \\ \underline{1} \phantom{000000} \\ 23 \phantom{00000} 074 \\ \underline{3} \phantom{00000} 69 \\ 262 \phantom{0000} 550 \\ \underline{2} \phantom{0000} 524 \\ 2641 \phantom{000} 2641 \\ \underline{1} \phantom{000} 2641 \\ \hline 0 \end{array}$$

Hence, the square root of 1745041 is 1321.

(xii)

$$\begin{array}{r} 2002 \\ 2 \overline{) 4008004} \\ \underline{2} \phantom{000000} 4 \\ 40 \phantom{00000} 000 \\ \underline{0} \phantom{00000} 00 \\ 400 \phantom{0000} 080 \\ \underline{0} \phantom{0000} 00 \\ 4002 \phantom{000} 8004 \\ \underline{2} \phantom{000} 8004 \\ \hline 0 \end{array}$$

Hence, the square root of 4008004 is 2002.

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