



Cubes and Cubes Roots Ex 4.3 Q1

Answer :

(i)

We have:

$$\begin{array}{r} 64 \\ \underline{1} \\ 63 \\ \underline{7} \\ 56 \\ \underline{19} \\ 37 \\ \underline{37} \\ 0 \end{array}$$

\therefore Subtraction is performed 4 times.

$$\therefore \sqrt[4]{64} = 4$$

(ii)

We have:

$$512$$

$$\begin{array}{r}
 1 \\
 \hline
 511 \\
 7 \\
 \hline
 504 \\
 19 \\
 \hline
 485 \\
 37 \\
 \hline
 448 \\
 61 \\
 \hline
 387 \\
 91 \\
 \hline
 296 \\
 127 \\
 \hline
 169 \\
 169 \\
 \hline
 0
 \end{array}$$

\therefore Subtraction is performed 8 times.

$$\therefore \sqrt[3]{512} = 8$$

(iii)

We have:

$$\begin{array}{r}
 1728 \\
 1 \\
 \hline
 1727
 \end{array}$$

1 1 2 1

$$\begin{array}{r} 7 \\ \hline \end{array}$$

1720

$$\begin{array}{r} 19 \\ \hline \end{array}$$

1701

$$\begin{array}{r} 37 \\ \hline \end{array}$$

1664

$$\begin{array}{r} 61 \\ \hline \end{array}$$

1603

$$\begin{array}{r} 91 \\ \hline \end{array}$$

1512

$$\begin{array}{r} 127 \\ \hline \end{array}$$

1385

169

$$\begin{array}{r}
 \hline
 1216 \\
 217 \\
 \hline
 999 \\
 271 \\
 \hline
 728
 \end{array}$$

$$\begin{array}{r}
 331 \\
 \hline
 397 \\
 397 \\
 \hline
 0
 \end{array}$$

\therefore Subtraction is performed 12 times.

$$\therefore \sqrt[3]{1728} = 12$$

***** END *****