

RD SHARMA

Solutions

Class 8 Maths

Chapter 3

Ex 3.8

EXERCISE - 3.8

Find the square root of following correct to three places of decimal.

(i) 5

$$\begin{array}{r} 2.236 \\ \hline 5.0000\ 00\ 00 \\ 4 \\ \hline 42\ 100 \\ \quad 84 \\ \hline 423\ 1600 \\ \quad 1329 \\ \hline 4266\ 27100 \\ \quad 26796 \\ \hline \quad \quad 304 \end{array} \quad \approx 2.236$$

(ii) 7

$$\begin{array}{r} 2.646 \\ \hline 7.0000\ 00 \\ 4 \\ \hline 46\ 300 \\ \quad 276 \\ \hline 524\ 2400 \\ \quad 2096 \\ \hline 5286\ 30400 \\ \quad 30316 \\ \hline \quad \quad 84 \end{array} \quad \approx 2.646$$

(iii) 17

$$\begin{array}{r} 4.123 \\ \hline 17.0000\ 00 \\ 4 \\ \hline 81\ 100 \\ \quad 81 \\ \hline 822\ 1900 \\ \quad 1644 \\ \hline 8243\ 26600 \\ \quad 24729 \\ \hline \quad \quad 1871 \end{array} \quad \approx 4.123$$

(iv) 20

$$\begin{array}{r} 4.472 \\ \hline 20.0000\ 00 \\ 4 \\ \hline 84\ 400 \\ \quad 336 \\ \hline 887\ 6400 \\ \quad 6209 \end{array} \quad \approx 4.472$$

$$\begin{array}{r}
 8942 \overline{) 19100} \\
 \underline{17834} \\
 1266
 \end{array}$$

(v) 66

$$\begin{array}{r}
 8.124 \\
 8 \overline{) 66.0000} \\
 \underline{64} \\
 200 \\
 161 \overline{) 200} \\
 \underline{161} \\
 3900 \\
 1622 \overline{) 3900} \\
 \underline{3244} \\
 65600 \\
 16224 \overline{) 65600} \\
 \underline{64976} \\
 624
 \end{array}$$

= 8.124

(vi) 427

$$\begin{array}{r}
 20.664 \\
 2 \overline{) 427.0000} \\
 \underline{4} \\
 027 \\
 0 \\
 406 \overline{) 2700} \\
 \underline{2036} \\
 66400 \\
 4126 \overline{) 26400} \\
 \underline{24756} \\
 166400 \\
 4126 \overline{) 166400} \\
 \underline{164296} \\
 1104
 \end{array}$$

= 20.664

(vii) 1.7

$$\begin{array}{r} 1.304 \\ \hline 1 \overline{) 1.7000} \\ \underline{1} \\ 070 \\ \underline{69} \\ 100 \\ \underline{0} \\ 1000 \\ \underline{1016} \\ -416 \end{array} = 1.304$$

(viii) 23.1

$$\begin{array}{r} 4.206 \\ \hline 4 \overline{) 23.1000} \\ \underline{16} \\ 710 \\ \underline{704} \\ 600 \\ \underline{0} \\ 6000 \\ \underline{5760} \\ 2360 \end{array} = 4.206$$

(ix) 2.5

(x) 2.5

$$\begin{array}{r} 1.581 \\ \hline 1 \overline{) 2.5000} \\ \underline{1} \\ 1250 \\ \underline{125} \\ 2500 \\ \underline{2464} \\ 360 \\ \underline{360} \\ 000 \\ \underline{000} \\ 0000 \\ \underline{0000} \\ 0000 \end{array} = 1.581$$

(x)

237-615

$$\begin{array}{r}
 15.415 \\
 \hline
 237.615 \overline{00} \\
 \underline{1} \\
 25 \quad 137 \\
 \underline{125} \\
 304 \quad 1261 \\
 \underline{1216} \\
 381 \quad 4550 \\
 \underline{3081} \\
 3825 \quad 146900 \\
 \underline{154125} \\
 7225
 \end{array}
 \quad = 15.415$$

(xi)

15.3215

$$\begin{array}{r}
 3.914 \\
 \hline
 15.3215 \overline{00} \\
 \underline{9} \\
 69 \quad 682 \\
 \underline{621} \\
 781 \quad 1115 \\
 \underline{781} \\
 7824 \quad 33400 \\
 \underline{31296} \\
 2104
 \end{array}
 \quad = 3.914$$

(xii)

0.9

$$\begin{array}{r}
 0.949 \\
 \hline
 0 \quad 0.9000 \overline{00} \\
 \underline{0} \\
 9 \quad 090 \\
 \underline{81} \\
 184 \quad 900 \\
 \underline{736} \\
 1889 \quad 16400 \\
 \underline{1701} \\
 601
 \end{array}
 \quad = 0.949$$

(xiii)

01

	0.316
0	0.10 00 00
0	0
3	10 9
61	100 61
626	39 00 3756
	144

= 0.316

(xiv)

0.016

	0.126
0	0.0160 00
0	0
1	001 1
22	060 44
246	1600 1496
	124

= 0.126

(xv)

0.00064

	0.025
0	0.0006 40
0	0
0	0.00 0
2	001 4
45	240 225
	15

= 0.025

(xvi) 0.019

$$\begin{array}{r}
 0.138 \\
 \hline
 0 \overline{) 0.019000} \\
 \underline{0} \\
 01 \\
 \underline{1} \\
 090 \\
 \underline{69} \\
 2100 \\
 \underline{2100} \\
 0000 \\
 \hline
 \end{array}$$

last digit is approximated.
= 0.138

(xvii) $\frac{7}{8} = 0.875$

$$\begin{array}{r}
 0.9375 \\
 \hline
 0 \overline{) 0.875000} \\
 \underline{0} \\
 9 \\
 \underline{087} \\
 81 \\
 \underline{650} \\
 509 \\
 \underline{10100} \\
 9325 \\
 \underline{775} \\
 0000 \\
 \hline
 \end{array}$$

= 0.9375

(xviii) $\frac{5}{12} = 0.416666$

$$\begin{array}{r}
 0.641 \\
 \hline
 0 \overline{) 0.416666} \\
 \underline{0} \\
 6 \\
 \underline{41} \\
 36 \\
 \underline{566} \\
 496 \\
 \underline{7066} \\
 6245 \\
 \underline{641} \\
 0000 \\
 \hline
 \end{array}$$

= 0.641

(xix) $2\frac{1}{2} = 2.5$

$$\begin{array}{r}
 1.521 \\
 \hline
 1 \overline{) 2.500000} \\
 \underline{1} \\
 25 \\
 \underline{150} \\
 125 \\
 \underline{308} \\
 2500 \\
 \underline{2464} \\
 3161 \\
 \underline{3600} \\
 3161 \\
 \underline{439} \\
 0000 \\
 \hline
 \end{array}$$

= 1.521