



$$\begin{array}{r}
 3.91452 \\
 3 \overline{) 15.3215} \\
 \underline{9} \\
 69 \\
 \underline{63} \\
 9 \\
 \underline{62} \\
 781 \\
 \underline{72} \\
 61 \\
 \underline{54} \\
 7824 \\
 \underline{72} \\
 64 \\
 \underline{54} \\
 1024 \\
 \underline{1024} \\
 0
 \end{array}$$

Hence, the square root of 15.3215 up to three decimal places is 3.914.

(xii) We can find the square root up to three decimal places by using long division until we get four decimal places and then rounding it to three decimal places.

$$\begin{array}{r}
 0.9486 \\
 .9 \overline{) 0.90} \\
 \underline{81} \\
 184 \\
 \underline{180} \\
 4 \\
 \underline{36} \\
 1888 \\
 \underline{1800} \\
 88 \\
 \underline{81} \\
 18966 \\
 \underline{18000} \\
 966 \\
 \underline{900} \\
 66 \\
 \underline{63} \\
 36
 \end{array}$$

Hence, the square root of 0.9 up to three decimal places is 0.949.

(xiii) We can find the square root up to three decimal places by using long division until we get four decimal places and then rounding it to three decimal places.

$$\begin{array}{r}
 0.3162 \\
 3 \overline{) 0.10} \\
 \underline{9} \\
 61 \\
 \underline{61} \\
 0 \\
 626 \\
 \underline{626} \\
 0 \\
 6322 \\
 \underline{6322} \\
 0
 \end{array}$$

Hence, the square root of 0.1 up to three decimal places is 0.316.

(xiv) We can find the square root up to three decimal places by using long division until we get four decimal places and then rounding it to three decimal places.

$$\begin{array}{r}
 0.1264 \\
 1 \overline{) 0.016} \\
 \underline{1} \\
 22 \\
 \underline{22} \\
 0 \\
 246 \\
 \underline{246} \\
 0 \\
 2524 \\
 \underline{2524} \\
 0
 \end{array}$$

Hence, the square root of 0.016 up to three decimal places is 0.126.

(xv) We can find the square root up to three decimal places by using long division until we get four decimal places and then rounding it to three decimal places.

$$\begin{array}{r}
 0.0252 \\
 2 \overline{) 0.00064} \\
 \underline{4} \\
 45 \\
 \underline{45} \\
 0 \\
 502 \\
 \underline{502} \\
 0
 \end{array}$$

Hence, the square root of 0.00064 up to three decimal places is 0.025.

(xvi) We can find the square root up to three decimal places by using long division until we get four decimal places and then rounding it to three decimal places.

0.1378	
1	0.019
1	1
23	90
3	69
267	2100
7	1869
2748	23100
8	21984
	1116

Hence, the square root of 0.019 up to three decimal places is 0.138.

(xvii) We can find the square root up to four decimal places by expanding $7/8$ to decimal form up to eight digits to the right of the decimal point as shown below:

$$\frac{7}{8} = 0.875$$

Hence, we have:

0.9354	
9	0.875
9	81
183	650
3	549
1865	10100
5	9325
18704	77500
4	74816
	2684

So, the square root of $7/8$ up to three decimal places is 0.935.

(xviii) We can find the square root up to four decimal places by expanding $5/12$ to decimal form up to eight digits to the right of the decimal point as shown below:

$$\frac{5}{12} = 0.41666666$$

Hence, we have:

0.6454	
6	0.41666666
6	36
124	566
4	496
1285	7066
5	6425
12904	64166
4	51616
	12550

So, the square root of $5/12$ up to three decimal places is 0.645.

(xix) We can find the square root up to four decimal places by expanding $2\frac{1}{2}$ into decimal form up to eight digits to the right of the decimal point as shown below:

$$2\frac{1}{2} = 2.50000000$$

But, this is the same with the value 2.5 in problem (ix). Hence, the square root of $2\frac{1}{2}$ is 1.581.

(xx) We can find the square root up to four decimal places by expanding $287\frac{5}{8}$ into decimal form up to eight digits to the right of the decimal point as shown below:

$$287\frac{5}{8} = 287.62500000$$

Hence, we have:

16.9595	
1	287.62500000
1	1
26	187
6	156
329	3162
9	2961
3385	20150
5	16925
33909	322500
9	305181
339185	1731900
5	1695925
	35975

So, the square root of $287\frac{5}{8}$ up to three decimal places is 16.960.

***** END *****

