



Squares and Square Roots Ex 3.8 Q1

Answer :

(i) 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.

$$\begin{array}{r}
 2.2360 \\
 2 \overline{) 5.000000} \\
 \underline{2 4} \\
 42 100 \\
 \underline{2 84} \\
 443 1600 \\
 \underline{3 1329} \\
 4466 27100 \\
 \underline{6 26796} \\
 304
 \end{array}$$

Hence, the square root of 5 up to three decimal places is 2.236.

(ii) 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.

$$\begin{array}{r}
 2.6457 \\
 2 \overline{) 7} \\
 \underline{2 4} \\
 46 300 \\
 \underline{6 276} \\
 524 2400 \\
 \underline{4 2096} \\
 5285 30400 \\
 \underline{5 26425} \\
 52907 397500 \\
 \underline{7 370349} \\
 27151
 \end{array}$$

Hence, the square root of 7 up to three decimal places is 2.646.

(iii) 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.

$$\begin{array}{r}
 4.1231 \\
 4 \overline{) 17} \\
 \underline{4 16} \\
 81 100 \\
 \underline{1 81} \\
 822 1900 \\
 \underline{2 1644} \\
 8243 25600 \\
 \underline{3 24729} \\
 82461 87100 \\
 \underline{1 82461} \\
 4639
 \end{array}$$

Hence, the square root of 17 up to three decimal places is 4.123.

(iv) 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.

$$\begin{array}{r}
 4.1231 \\
 4 \overline{) 20} \\
 \underline{4} 16 \\
 84 400 \\
 \underline{4} 336 \\
 887 6400 \\
 \underline{7} 6209 \\
 8942 19100 \\
 \underline{2} 17884 \\
 89441 121600 \\
 \underline{1} 89441 \\
 \hline
 32159
 \end{array}$$

Hence, the square root of 20 up to three decimal places is 4.472.

(v) 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.

$$\begin{array}{r}
 8.1240 \\
 8 \overline{) 66} \\
 \underline{8} 64 \\
 161 200 \\
 \underline{1} 161 \\
 1622 .3900 \\
 \underline{2} 3244 \\
 16244 .65600 \\
 \underline{4} 64976 \\
 \hline
 62400
 \end{array}$$

Hence, the square root of 66 up to three decimal places is 8.124.

(vi) 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.

$$\begin{array}{r}
 20.6639 \\
 2 \overline{) 427} \\
 \underline{2} 4 \\
 406 2700 \\
 \underline{6} 2436 \\
 4126 26400 \\
 \underline{6} 24756 \\
 41323 164400 \\
 \underline{3} 123969 \\
 413269 4043100 \\
 \underline{9} 3719421 \\
 \hline
 323679
 \end{array}$$

Hence, the square root of 427 up to three decimal places is 20.664.

(vii) 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.

$$\begin{array}{r}
 1.3038 \\
 1 \overline{) 1.7} \\
 \underline{1} 1 \\
 23 .70 \\
 \underline{3} 69 \\
 2603 10000 \\
 \underline{3} 7809 \\
 26068 219100 \\
 \underline{8} 208544 \\
 \hline
 10556
 \end{array}$$

Hence, the square root of 1.7 up to three decimal places is 1.304.

(viii) 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.

$$\begin{array}{r}
 4.8062 \\
 4 \overline{) 23.1} \\
 \underline{4} 16 \\
 88 710 \\
 \underline{8} 704 \\
 9606 60000 \\
 \underline{6} 57636 \\
 96122 236400 \\
 \underline{2} 192244 \\
 \hline
 44156
 \end{array}$$

Hence, the square root of 23.1 up to three decimal places is 4.806.

(ix) 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.

$$\begin{array}{r}
 1.5811 \\
 1 \overline{) 2.5} \\
 \underline{1} \\
 25 \\
 \underline{5} \\
 308 \\
 \underline{8} \\
 3161 \\
 \underline{1} \\
 31621 \\
 \underline{1} \\
 12279
 \end{array}$$

Hence, the square root of 2.5 up to three decimal places is 1.581.

(x) 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.

$$\begin{array}{r}
 15.4146 \\
 1 \overline{) 237.615} \\
 \underline{1} \\
 25 \\
 \underline{5} \\
 304 \\
 \underline{4} \\
 3081 \\
 \underline{1} \\
 30824 \\
 \underline{4} \\
 308286 \\
 \underline{6} \\
 160684
 \end{array}$$

Hence, the square root of 237.615 up to three decimal places is 15.415.

(xi) 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.

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