

EXERCISE 3(B)

Question 1. Find the square root of:

(i) 4761

Solution:

| | |
|-----|------|
| | 69 |
| 6 | 4761 |
| | 36 |
| 129 | 1161 |
| | 1161 |
| | x |

Required square root = 69

(ii) 7744

Solution:

| | |
|-----|------|
| | 88 |
| 8 | 7744 |
| | 64 |
| 168 | 1344 |
| | 1344 |
| | x |

Required square root = 88

(iii) 15129

Solution:

| | |
|-----|-------|
| | 123 |
| 1 | 15129 |
| | 1 |
| 22 | 51 |
| | 44 |
| 243 | 729 |
| | 729 |
| | x |

Required square root = 123

(iv) 0.2916

Solution:

| | |
|-------|--------|
| | 0.54 |
| 0.5 | 0.2916 |
| | 0.25 |
| 0.204 | 416 |
| | 416 |
| | x |

Required square root = 0.54

(v) 0.001225

Solution:

| | |
|-------|----------|
| | 0.035 |
| 0.03 | 0.001225 |
| | 9 |
| 0.065 | 325 |
| | 325 |
| | x |

Required square root = 0.035

(vi) 0.023104

Solution:

| | |
|-------|----------|
| | 0.152 |
| 0.1 | 0.023104 |
| | 0.01 |
| 0.25 | 131 |
| | 125 |
| 0.302 | 604 |
| | 604 |
| | x |

Required square root = 0.152

(vii) 27.3529

Solution:

$$\begin{array}{r}
 \hline
 5.23 \\
 \hline
 5 \ 27.3529 \\
 \hline
 25 \\
 102 \ 2.35 \\
 \hline
 2.04 \\
 1043 \ 3129 \\
 \hline
 3129 \\
 \hline
 x
 \end{array}$$

Required square root = 5.23

Question 2. Find the square root of:

(i) 4.2025

Solution:

$$\begin{array}{r}
 \hline
 2.05 \\
 \hline
 2 \ 4.2025 \\
 \hline
 4 \\
 405 \ .2025 \\
 \hline
 .2025 \\
 \hline
 x
 \end{array}$$

Required square root = 2.05

(ii) 531.7636

Solution:

$$\begin{array}{r}
 \hline
 23.06 \\
 \hline
 2 \ 531.7636 \\
 \hline
 4 \\
 43 \ 131 \\
 \hline
 129 \\
 4606 \ 2.7636 \\
 \hline
 2.7636 \\
 \hline
 x
 \end{array}$$

Required square root = 23.06

(iii) 0.007225

Solution:

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| | |
|-------|----------|
| | 0.085 |
| 0.8 | 0.007225 |
| | 64 |
| 0.165 | 825 |
| | 825 |
| | x |

Required square root = 0.085

Question 3. Find the square root of:

(i) 245 correct to two places of decimal.

Solution:

| | |
|------|-------|
| | 15.65 |
| 1 | 245 |
| | 1 |
| 25 | 145 |
| | 125 |
| 306 | 2000 |
| | 1836 |
| 3125 | 16400 |
| | 15625 |
| | 775 |

Required square root = 15.65 up to two places of decimal.

(ii) 496 correct to three places of decimal.

Solution:

| | |
|-------|--------|
| | 22.271 |
| 2 | 496 |
| | 4 |
| 42 | 96 |
| | 84 |
| 442 | 1200 |
| | 884 |
| 4447 | 31600 |
| | 31129 |
| 44541 | 47100 |
| | 44541 |

Required square root = 22.2708 = 22.271 up to two places of decimal.

(iii) 82.6 correct to two places of decimal.

Solution:

| | |
|-------|--------|
| | 9.088 |
| 9 | 82.6 |
| | 81 |
| 1808 | 16000 |
| | 14464 |
| 18168 | 153600 |
| | 145324 |

Required square root = 9.088 = 9.09 up to two places of decimal.

(iv) 0.065 correct to two places of decimal.

Solution:

| | |
|--------|--------|
| | 0.2549 |
| 0.2 | 0.065 |
| | 0.04 |
| 0.45 | 250 |
| | 225 |
| 0.504 | 2500 |
| | 2016 |
| 0.5089 | 48400 |
| | 45801 |

Required square root = 0.255 up to two places of decimal.

(v) 5.2005 correct to two places of decimal.

Solution:

| | |
|-----|--------|
| | 2.28 |
| 2 | 5.2005 |
| | 4 |
| 42 | 120 |
| | 84 |
| 448 | 3605 |
| | 3584 |
| 456 | 2100 |

Required square root = 2.28 up to two places of decimal.

(vi) 0.602 correct to two places of decimal

Solution:

| | |
|-------|---------------|
| | 0.775 |
| 0.7 | 0.602 0.49 |
| 0.147 | 1120 1029 |
| 1545 | 9100 7725 |
| | 1375 |

Required square root = 0.78 up to two places of decimal.



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