Samples

Square Roots SOLUTIONS

1. $\sqrt{225} = \sqrt{3 \times 75} = \sqrt{3 \times 3 \times 25} = \sqrt{3 \times 3 \times 5 \times 5}$. Then $\sqrt{225} = 3 \times 5$.

Hence the solution is 15

2. $\sqrt{192} = \sqrt{2 \times 96} = \sqrt{2 \times 2 \times 48} = \sqrt{2 \times 2 \times 2 \times 24}$ = $\sqrt{2 \times 2 \times 2 \times 2 \times 12} = \sqrt{2 \times 2 \times 2 \times 2 \times 2 \times 6} = \sqrt{2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3}$.

Then $\sqrt{192} = 2 \times 2 \times 2 \times \sqrt{3}$.

Hence the solution is $8\sqrt{3}$

3. $\sqrt{243} = \sqrt{3 \times 81} = \sqrt{3 \times 3 \times 27} = \sqrt{3 \times 3 \times 3 \times 9} = \sqrt{3 \times 3 \times 3 \times 3 \times 3}.$

Then $\sqrt{243} = 3 \times 3 \times \sqrt{3}$.

Hence the solution is $9\sqrt{3}$