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Finding square roots

You have practiced solving equations with squared terms. You may find that some equations are more difficult to solve. The square root of many numbers is not a whole number. It is a number with a decimal remainder. For example, here is the square root of 52.

$\sqrt{52}$

The number 52 is not a perfect square. To find the square root of numbers like 52, we can use a calculator, or we can use a square root table.

To find the square root of the number 52 with a calculator, you just type 52 and then press the square root sign. You will see a long string of numbers. We won't worry about every number after the decimal place. Let's use up to three decimal places. The square root of 52 is 7.211.

To find the square root using a table, go to the number column and find 52. Then look at the square root column to find the square root of 52.

Now try to find the square root of 83. Use a calculator first. What do you get?

$\sqrt{83}$ = 9.110

When you write only three decimal places, the square root of 83 is 9.110. Is it the same on a square root table? Yes, it is.

Let's try another. Calculate the square root of 5.

$\sqrt{5}$ = 2.236

Is 2.236 the square root of 5 on your table? Yes! If you write your calculation to the third decimal place, you will find the same value with a table and with a calculator.