

Answer on Question #60696 – Math – Algebra

Question

What Is The Rules Of Subtracting Whole Numbers And Decimal ?

Solution

There are two basic written methods of subtracting whole numbers:

- 1) subtraction by equal addition;
- 2) subtraction by regrouping, or borrowing.

Subtraction by equal addition

It is based on the following property of subtraction: If we add the same number to both the larger and the smaller, the difference will not change.

In the example

$$10 - 8 = 12 - 10 = 2,$$

We have added 2 to both 10 and 8.

Subtraction by regrouping, or borrowing

How do we subtract the following numbers?

$$\begin{array}{r} 8, 3 4 5 \\ - \\ \hline 5, 8 7 2 \end{array}$$

Write the smaller number under the larger, taking care to align the same units. Then, starting with the ones on the right, subtract each digit on the bottom from the corresponding digit on top. When each digit in the 'bottom number' is less than or equal to the digit in the 'top number', you simply subtract in each column

$$\begin{array}{r} 5 \\ - \\ \hline 2 \\ 3 \end{array}$$

When the bottom digit is greater (for example, 7 is greater than 4), consider the top digit increased by 10 with a compensation (you need to 'borrow' and subtract one) in the next digit. So we subtract 7 from 14, then 2 will be in the hundreds column.

$$\begin{array}{r} 2 \quad 14 \\ 3 \quad 4 \quad 5 \\ - \\ \hline 8 \quad 7 \quad 2 \\ 7 \quad 3 \end{array}$$

Next, because 8 is greater than 2, we subtract 8 from 12, then 7 will be in the thousands column. The number 7 minus 5 gives 2.

$$\begin{array}{r} 7 \quad 12 \\ 2 \quad 14 \\ 8, 3 4 5 \\ - \\ \hline 5, 8 7 2 \\ 2, 4 7 3 \end{array}$$

Fractions are subtracted by extending or reducing them to a common denominator and then subtracting the numerators while keeping the denominator.

To subtract decimals, follow these steps:

1. Write down the two numbers, one under the other, with the decimal points lined up.
2. Add zeros so the numbers have the same length
3. Then subtraction of decimals is similar to that of whole numbers, remembering to put the decimal point in the answer.