

Shelton Park Elementary School

"Lions Learn With Pride!"

Dear Parents:

We have begun division in math class and we are teaching students a method that you may not be familiar with.

When students first begin learning about addition, subtraction, multiplication, and division, they spend a lot of time experimenting with a variety of problem-solving methods. Students are required to demonstrate proficiency in one algorithm (method) for each operation — addition, subtraction, multiplication, and division.

One method for dividing large numbers is called **Partial Quotients**. It looks very different from the traditional method of division. Students arrive at a solution by estimating repeatedly.

When your child brings home assignments involving division, we ask that you allow them to work the problems using the **partial quotients method**.

Example: Partial quotients

Estimate the number of 12s in 158.

You might begin with multiples of 10 because they are simple to work with.

There are at least ten 12s in 158 ($10 \times 12 = 120$), but there are fewer than twenty ($20 \times 10 = 240$).

Record 10 as a first estimate, and subtract ten 12s from 158, leaving 38.

Now estimate the number of 12s in 38.

There are more than three ($3 \times 12 = 36$), but fewer than four ($4 \times 12 = 48$).

Record 3 as the next estimate, and subtract three 12s from 38, leaving 2.

Since 2 is less than 12, you can stop estimating.

The final result is the sum of the estimates ($10 + 3 = 13$) plus what is left over (the remainder of 2).

$$\begin{array}{r|l} 12 \overline{) 158} & 10 \text{ first guess} \\ \underline{120} & \\ 38 & 3 \text{ second guess} \\ \underline{36} & \\ 2 & 13 \text{ sum of guesses} \end{array}$$

$$158 / 12 \longrightarrow 13 R2$$

We encourage students to practice this algorithm and not traditional long division. We will not be teaching this long division method in the classroom. We have found that students can get confused when they learn one way at school and another at home.

Please don't hesitate to call us if you have any questions or suggestions.

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