## Commom errors

February 12, 2008 Early Childhood Division A. - The Types of Errors Made In the Problems Looking at each problem in the outline for this paper, it is easy to see that the child is making what we would term " silly mistakes". It is not so much that the students in the outline do not grasp the concept of long division. Rather, it is in the application of long division that the trouble exists. The mistake for the first student was that he simply erred in multiplying 8 x 9. Clearly this error arises due to not memorizing his times tables. While it is tiresome for students to memorize their times tables, they will appreciate it when they start division. I would have the student review $8 \times 9$ and $9 \times 8$ just to ensure that they realize that each problem has the same answer. Next, student 2 has issues bringing down the proper numbers upon the first round of subtraction. This clearly is a result of misplacement. Placement is crucial in long division because if the student places the quotient in the wrong place, the entire problem is ruined! The third student has misplaced the quotient from the start and thus ruined his chances for a correct answer. This student too needs assistance in placement. He does, however have the mechanics in hand thus is in better shape than the second student. B. - How to Verify the Mistakes Made By The Students.

The best way to verify the mistakes made by the students is to work out the problem with them. As the student is reviewing their work with you, you can gage whether the mistake was a chance happening or whether the student truly is not comprehending the task. Have the student multiply their incorrect quotient by the divisor and they will see it for themselves. Better yet, after the student has seen his/her error after the attempted multiplication of the quotient and divisor, have the student do the division problem with you and explain their steps to you as they do it.

## C - How To Correct The Mistakes Presented In The Problems

The best way to correct the mistake presented in the three referenced problems is practice, practice and more practice. It takes a while to become comfortable with long division and there is a great deal of time and patience that should be invested by the student and the teacher. Corrections will take as much patience as the problem itself, but it is worth it. Student 1 can correct himself by memorizing his times tables. Clearly, he has the mechanics in hand. Student 2 and 3 should work with spacing. It would be a good idea to try covering up the spaces that they are not dealing with at the moment along with the other numbers in the problem.

Ex.: 7216 divided by 8.

1. Have the student write the problem
2. Have the student place their finger, or a something that will block them from looking at the " 16 ", thus only focusing on the 72.
3. Have the student multiply the $8 \times 9$ and subtract if from the 72 .
4. Once they have entered the 0 , THEN uncover the 1 and bring it down to the 0 .
5. Have the student answer whether 8 goes into 01.
6. The answer is 0 so have the student write it up next to the 9 .
7. Once they have entered the 9, THEN uncover the 6 and bring it down. If the child cannot see the place, they cannot be confused by it so hopefully by keeping it covered; it will help them with placement! As always, the more practice the child does, the faster they will learn it and the faster their confidence will grow!

Works Consulted
Bertoch, H. (1998). Kid's numbers. com. Retrieved February 21, 2008, from

Snork's Long Division Game Web site: http://www. kidsnumbers. com/longdivision. php.

