

**“I Did it in My  
Head!”**



**“...and I understand!”**

**(Mental Math Strategies)**

Facilitated by Ray Appel

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## Why Mental Math and Estimation are important.

You wouldn't believe the frustration I hear about teaching math... Kids counting on their fingers, starting to add by always going back to "1", and not able to memorize facts. There are many reasons for this, but some of the mental math strategies as suggested in the IRP may help. Here are some reasons why supporting our students to learn not only the HOW, but the WHY to help build the understanding we crave as teachers (and as students!).

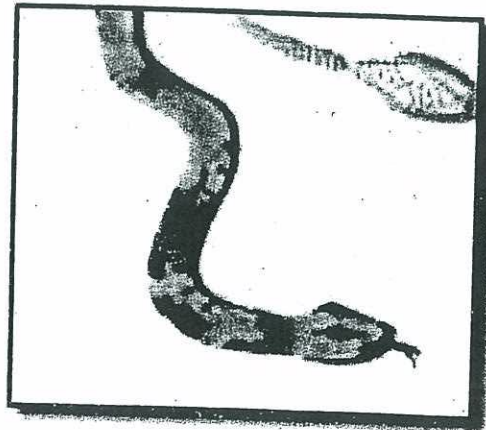
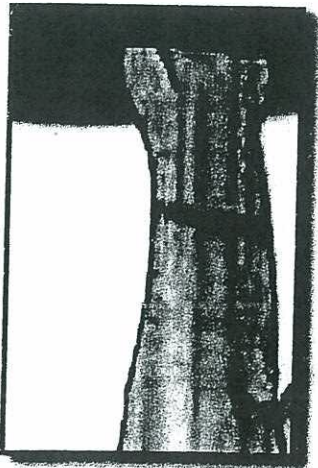
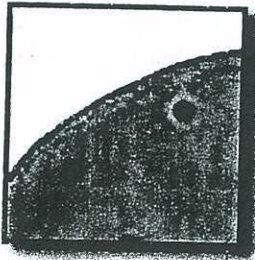
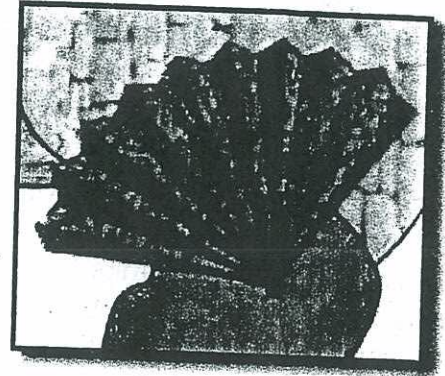
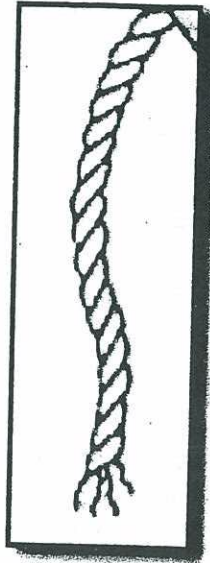
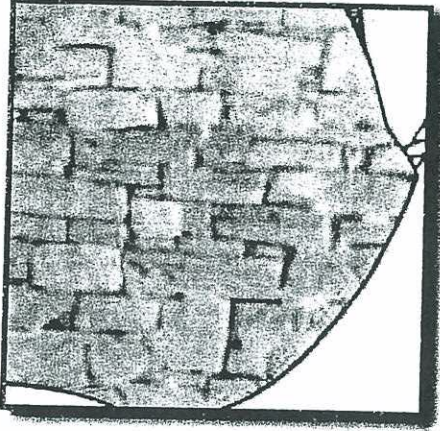
**Circle 3 or 4 of the items which you most value for students. I want students to:**

1. ... "know" Place Value.
2. ... use "Expanded Form"
3. ....see that rounding is an important skill
4. ... step back and see the big picture (see the larger parts first, then examine the smaller parts)
5. ... look at numbers as numbers, not isolated digits
6. ... know that often there is more than one approach
7. ... become more efficient
8. ... understand base ten concepts
9. ... build on their own understanding
10. ... promote good mathematical thinking
11. ... learn strategies that can serve them at least as well on standardized tests as other ways
12. ... use other strategies when memorization and manipulatives don't seem to "work"





Look carefully at these pictures. What do you see in each one. Look carefully.... Jot down some ideas next to each picture.



**What do other people see?**