

Finding Memories in a 5 year old's Wonderings about Numbers

from Susan Richman

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Recently during one of those icy days in mid-January, when our electricity was out so none of us could use our computers, we all put in lots of hours cleaning out the office in our home. You know, the piles that accumulate in file drawers, on top of file cabinets, in desk drawers, on overstuffed shelves, on desk tops, and under desks. Ours was pretty bad, and by the end of the day I had literally 10 grocery bags full of old useless papers and catalogs and files to take to the local recycler. To inspire our day's work, I read aloud from one of Don Aslett's books on de-junking and de-cluttering during breakfast and lunch. One thought stuck in my mind as I read his list of funny reasons why you should take the needed time to ream out your office shelves regularly he pointed out that you just might find some real treasures there. I want to share here about a few I found that day.

I came across a stack of rather crumpled large envelopes, with homemade stapled together booklets inside. I recognized them right away as a very old record-keeping method of mine when our son Jesse was quite young these were from back in the dark ages before we ever had to show such things to the school districts. My first impulse was to just pitch the whole batch right into the trash can without even looking at them. But thought I'd just check them out a little bit first... and I'm glad I did. Before me the younger years of my two boys, Jesse now 21 and Jacob now 18, came alive for me again.

Turns out I took the time back then (I fully admit I do not do this anymore) to really record little things the boys said to me that showed what they were thinking. There were really cute little things like a notation that Jacob was seen lying on his back on the sofa kicking his feet rhythmically up in the air as a 3 year old, chanting aloud happily over and over again, "I can't walk with two feet in air, I can't walk with two feet in air....", or funny conversations the boys had while playing with little plastic dinosaurs or soldiers.

I especially found lots of math wonderings, and reading them over made me realize again that this chance to have informal conversations with a parent, who usually has much more time to listen than a teacher with a whole busy class, is so important to young kids. In fact, this chance to just talk and wonder about things like numbers is probably more important than the time put into just going through the motions of doing daily math work if it's not accompanied by real thinking or better put, maybe the real purpose of math lesson times with our kids is the opportunity they give us to have these sorts of focused conversations. Thought you all might enjoy some of these wonderings might help you value the wonderings your own kids do related to math, or any other subject area. Shows how much young kids can really work at trying to see the order to things....

Here's one from when Jesse was 5½, in January of 1983: In bed reading aloud more of *Farmer Boy*. Somehow the idea of 'ten' came up and a light suddenly flashed for Jesse. "You mean, 'ten' is '2 fives'??" Then on to $20 = 2 \text{ tens}$ (here he asked, "Why don't they give it its own separate name?"). $2 \text{ four's} = 8$, $2 \text{ three's} = 6$, using hands and fingers. Suddenly seeing whole new relationships exciting moment!

And later that same month: More Cuisenaire Rod play [note these are a terrific math manipulative, one of the best]. As I washed dishes in the morning I asked Jesse which rods have even halves. Jesse bounded off, worked with great energy, made guesses, tested ideas, very excited. Also found quarters, thirds, etc. Has discovered for himself that the black rod (representing 7 units) has no even dividers of anything. Discussed idea of odd and even, and it seemed immediately clear.

In March, math came up informally as we ate orange slices: "I think I'll have two 4's of slices," says Jesse. "Ah! but there are two oranges for you, so really you'll have four 4's," I say. Jesse thinks, "That makes ... two 8's!! How many is that?" He tries counting up to four several times, but that doesn't help much. I suggest Cuisenaire Rods can help. I get 4 purple rods [these stand for 4 units]. Jesse understands why. Lay them end to end. "Now, to find the number total, find what an orange rod [which equals 10 units] plus what other rod would equal 4 purples." "A SIX!" Jesse sees. $6 + 10 = 16$.

Maple syrup-making time meant lots of hands-on helping in the kitchen: Jesse helping count out jars and lids and rings for maple syrup batch. Got six quarts, found we actually needed one more. Full jars set up in two rows on table, 3 + 4. Jesse counted, we talked about being able to see that 7 didn't have an equal half, then Jesse said: "But what's one more than 7? 8? I know 8 has an even half two 4's make 8. And one less than 7 is 6, and it has an even half, too!" Talk of how even and odd numbers seemed to go every other number... Then Jesse asked, "Which do you think there are more of, evens or odds?" He thought odds, I pondered!

This same month Jesse also came out with "I know that 12 is an even number you know how? Because 12 is 2 more than 10, and 10 is even. If 12 were just one more than 10 it would be uneven, but since it's two more, it is even."

He also wondered aloud about big numbers that month: Cuisenaire play Jesse mused on sofa about what a thousand 1000's would be, then a million millions, etc., delighting in huge names, and possibly nameless numbers. Then back to ten 100's what was that. He wondered if he could make 1000 with Cuisenaire rods and tried and did it. Very methodical about it first used all orange [10 units] rods for 100, blue plus white [9 + 1] for 200, and on and on...

Math came up when building with blocks too: Jesse, while working on his five-story block building barn, says that there are 10 goats in his barn, and showed where they should be milked. He must have been thinking about them coming out evenly in two milking stands, for he then said, "Ten is an even number." Then after a moment's reflection he said, "It seems that two odd numbers added together gives you an even number." Incredible. And just think all without a math workbook.

In April Jesse wondered aloud, "Could camels with two humps live for six days on their humps, since camels with one can live for three with nothing to eat, and two 3's equal 6?" A morning query from Jesse after we read *The Camel's Hump* yesterday on a car ride home from town.

A spontaneous musing from Jesse: "Hey! I bet that if you took out all the odd numbers from 1 to 100, that you'd just have left a half of 100!"

By summer Jesse had developed a game of using Cuisenaire Rods for playing store: Jesse was store keeper and set 'prices' in rods, and I 'paid' in rods, always giving extra and so needing change. Jesse figured out how to figure my change variation was that he'd purposely fool me to see if I'd 'check.'

By September, Jesse was thinking easily about fractions: Jesse figured out, in his head, how many hours Bev had worked for us. $2 \frac{1}{2} + 1 \frac{1}{2} + 3 = 7$ hours! He said, "The 2 and the 1 equal 3, and two 3's is 6, and the two $\frac{1}{2}$'s equal 1, so that makes 7!"

Finally I gathered up all the little booklets, put them back in their envelopes, and filed them away on my shelves again. It was fun to get an unexpected peek at the boys' early years again, to remember these early years of wondering and figuring and musing and playing. Reminds me of how we all love to occasionally go back through early portfolios, laughing over the funny spellings in early scrawled stories, the earnest artwork, the memories of travels and trips and homeschooling get togethers with friends. It's worth it to keep these records of our kids' growing up years. The years do go by quickly, just like everyone says they do.

Wonder what I'll find in the next room I clean out...