

The Magic of Math

Graham Weston, Chairman, Rackspace

It's hard to say when I discovered that I loved math because I always loved math. But I think that one of the earliest times when I started seeing the possibilities in math was in Mr. Montanio's first grade class when we did something called Motor Math. We would put squares of carpet samples all over the gymnasium floor and move them around in groups of, say, five or ten. That was when I discovered that we can use math to describe things specifically. How else can we describe 10 squares of carpet samples? Two stacks of five. Five short stacks of two. One tall stack of 10.

Math helps us describe things. How much does a toy cost? How many movie tickets are left on my gift card? How many days until the weekend? How much time will it take to do my homework? How long until summer? How many miles to go until we reach Sea World? What is our strategy for winning the football game--field goal or touch down?

I think I might have been the only kid in class who loved word problems because it helped me see how I could make the real world work for me. For most kids in my class, math was an abstract, but it came alive for me when I could use it to choose which dream to chase. I was never interested in math as an abstract. I wanted to know about math and its possibilities. Five wasn't just 5. To me, 5 was five quarters. It was \$1.25. It was five days in the school week. Four wasn't just 4. It was 4 quarter notes, or two half-notes, in music when I was learning to play the piano. Three quarter notes would mean that I would be playing a waltz.

And then I saw how math helps us choose our dreams. The dreams we pick are important and math helps us choose which dreams we're going to commit to. We can't chase all our dreams. But when we translate our dreams into math, we can see which dreams stand the best chance of coming true and how much time and resources we will need to make those dreams a reality. And for me, when math translated my dreams into reality, they came out as businesses.

I had my first business when I was 12 or 13. It was during the nitrate scare and I raised pigs that were fed all natural feed. I put an ad in the local newspaper to sell my pigs. My Dad and I came up with the headline: GO HOG WILD! Here was the magic profit formula: 3 months, three weeks, 3 days. That is the gestation period of pigs. So knowing that, I knew how many pigs (piglets are an invention of Disney) I could expect from each of my two sows (two sows multiplied by 10 piglets, which was the typical size of a litter, would equal 20 pigs times three a year, which would yield about 60 pigs every year). That told me how many customers I needed, how big the pens would have to be, how much all natural feed I would need, and the amount of profit I could expect. This was math wholly removed from the abstract. This was math in the real world- math in my pig pen!

When I was 15, I started a photography business. I took pictures at the local livestock shows. The kids in the show had to give a photo of their animals as a "thank you" for their sponsors. I remember thinking, "1000 animals at \$5.00 per photo---that's a business! Then, all I needed was to learn photography and get a camera! By translating my ideas into math, I was able to judge quickly whether or not my idea would be a good one.

Bigger numbers make bigger dreams come true. One of the young founders of Rackspace showed me a simple spreadsheet of numbers that showed me how Rackspace could grow and how customers could add up month-to-month. I remember the number 100 was a big deal for me when Rackspace installed its 100th server after three months in business! Wow! Now, that was a business! Today, Rackspace manages 35,000 servers for our customers, and we but that 100th server still stays in my mind as a landmark moment.

And now I see that I can use math to help other people make their dreams come true. That's what business is all about. Businesses not only make money for their owners and participants, which we all need in order to survive, but they also create a lot of meaning in our lives and our customers' and employees' lives. Thanks to the basics of math, business is a complex mosaic of people, skills, talents, creativity, dreams, and innovation wrapped around a customer's need. Because of math, business becomes a place where dreams get hatched and people come to work every day to make those dreams come true.

Math is one of the raw materials of great ideas.

Here are a few of my favorite numbers:

- 13: The number of years I've been married to my wife Elizabeth
- 3: The number of children I have
- 43: How old I am
- 3: How many dogs my family has
- 5: How many cats we have
- 5: How many computers we have at home
- 5: How many bottles of water I drink every day
- 4: How many countries I've visited in the last 2 years
- 5: The number of people who started Rackspace
- 2,179: The number of people who work at Rackspace today
- 62%: The rate of growth that Rackspace experienced in 2007
- 32: Our ranking on Fortune magazine's 100 Best Companies to Work For list in 2008

Math has helped me create a life that is the story of my dreams.