

A TEACHER REFLECTS

One of the first things I noticed when I started using spreadsheets was how easy it was to make a mistake. I remember one time I was trying to make a formula and I kept getting an error message. I was so frustrated that I almost gave up. But then I realized that I had to be more careful. I started to write down the formula first and then type it into the spreadsheet. This helped me to see what I was doing and to catch any mistakes before I typed them in. I also found that it was important to use the equal sign (=) at the beginning of the formula. I had heard that you had to use it, but I didn't know why. I went back to my math teacher and asked her for help. She told me that the equal sign was like a command to the computer to do the calculation. I was so relieved that I had found the answer. I was so proud of myself that I showed my classmate how to do it. She was so happy that she learned from me. I was so glad that I had helped her. I was so proud of myself that I showed my classmate how to do it. She was so happy that she learned from me. I was so glad that I had helped her.

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Formulas in Spreadsheets?

This was the phase in the unit where my students first encountered formulas. I soon found out that they had preconceived notions of what a formula is and how it should look. They also noticed that a formula looks a little different on a spreadsheet. *I found that out myself!*

Students would typically forget to type in the equal sign (=) before they entered the formula into the cell. I played the What's My Formula? Game with the class before students played it with their partners. They told me what to do. If they did not say "equal" first, I did not write anything down. I just stood there quietly. The students would look at me and say, "She's not writing anything." Soon a few students would say, "Equals! You forgot to say equals!" I would then continue to write the rest of the formula. The more I thought about why some students were confused about formulas, the more I realized that maybe it was because I wasn't clear about spreadsheet formulas and I needed to work through that.

Students really loved learning about the "fill down" option available on the computer to enter formulas. One special education student wrote the report shown which explains the concept of fill down, and is a wonderful commentary on the positive influence the unit had on this student's attitude toward math.

Doubling Profit

In Lesson 6, some of the students just agonized over getting *exactly* double the profit. I realized that we had to talk some common sense, so I asked, "Do you think a business person would mind if she went a little over double?" This helped students understand that an approximation was not only sometimes mathematically acceptable, but could be applied to the real world as well. Then as long as these students got a little more than double, they felt comfortable.

To double profit, some students used the "guess and check" method. They would write down some numbers and then go to the spreadsheet on the computer to check their numbers. When that didn't work, students would brainstorm with their partner about why and what to try next. This was acceptable to me because I think a great deal of learning occurs when students go back and revise their work. It is like the scientific method where students would make a conjecture, and the spreadsheet on the computer would prove or disprove it!