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Idea #2: More Rounding Off Numbers & Etc.

The interesting part comes when students have to program a spreadsheet that will calculate the total cost of Boonabs which cost \$1.79 per pound, when different weights are put in:

- Start a new spreadsheet.
- Create what you see on the right. To get the total cost column to do the calculation:
- Place the formula =A3*B3 in cell C3.
- Highlight the cells C3 through C7.
- Choose FJLL DOWN from the EDSJ menu.

	A	B	C
1	BOONABS		
2	LBS.	COST PER LB.	TOTAL COST
3	1	1.79	1.79
4	2	1.79	3.58
5	2.5	1.79	4.475
6	2.37	1.79	4.2423
7	2.99	1.79	5.3521

So how much is 5.3521? In order to simulate money, of course, we have to round off this number by using the "rounding" function, which will result in what you see below.

	A	B	C
1	BOONABS		
2	LBS.	COST PER LB.	TOTAL COST
3	1	\$1.79	\$1.79
4	2	\$1.79	\$3.58
5	2.5	\$1.79	\$4.47
6	2.37	\$1.79	\$4.24
7	2.99	\$1.79	\$5.35

• Highlight all the cells that you want to change to currency format.

• From the FJRMAT menu choose CURRENCY.

• Click on OK. Your columns should now be in currency format.

Idea #3: Looking at number patterns

One of the things that is most confusing to children learning mathematics is why 0 divided by 1 is not the same as 1 divided by 0. This can be shown by having students program a spreadsheet for themselves to see the difference. For example, we can create a spreadsheet to show what happens when 0 is divided by a whole number.

One interesting touchpoint for discussion is the fact that when a number is divided by itself, it should be equal to 1. However, the fact that no number can be divided by 0 contradicts this, therefore resulting in spreadsheet (A).

One interesting way of confronting this is to put together another spreadsheet (or continuing with the previous one) in which it is shown what happens as one takes a whole number and divides it by progressively smaller numbers. For example, what would happen if we started out with the number 8 and divided it by 16, then half of 16, and so on, until the numbers got very small?

	A	B	C
1	DIVIDEND	DIVISOR	QUOTIENT
2	0	8	0
3	0	7	0
4	0	6	0
5	0	5	0
6	0	4	0
7	0	3	0
8	0	2	0
9	0	1	0
10	0	0	ERR

(A)

	A	B	C
1	DIVIDEND	DIVISOR	QUOTIENT
2	8	16	0.5
3	8	8	1
4	8	4	2
5	8	2	4
6	8	1	8
7	8	0.5	16
8	8	0.25	32
9	8	0.125	64
10	8	0.0625	128
11	8	0.03125	256

(B)

As the divisor gets smaller and smaller, the quotient gets larger and larger. This introduces the notion of limits: as the divisor gets closer and closer to 0, the quotient will get larger and larger (perhaps reaching infinity). It probably would also be illuminating to look at the graph and have students predict what would happen if this pattern continued. Again, using a spreadsheet makes it easy. □