

## 2.3 Subtract Real Numbers TEKS *a.5; 8.2.B*

**QUESTION** How can you use a spreadsheet to subtract the same number from various numbers?

In a spreadsheet, the columns are identified by letters, and the rows are identified by numbers. Each cell has a name that is made up of a letter and a number. For example, B2 is the cell in column B and row 2. A cell can contain a label, a number, or a formula.

	A	B
1		
2		

**EXAMPLE** Find the difference of two numbers

A manufacturing company is making foam hand grips for bicycles and jump ropes. The ideal length of a hand grip is 5 inches. In a batch of ten hand grips, the actual lengths (in inches) are 4.878, 4.902, 5.115, 5.13, 4.877, 4.874, 4.799, 4.819, 4.879, and 5.124. Create a spreadsheet to find the difference of the actual length and the ideal length for each hand grip.



### Solution

**STEP 1** Enter data

Enter the labels in the first row of the spreadsheet. Then enter the grip numbers and grip lengths in successive rows.

	A	B	C
1	Grip	Length (inches)	Difference
2	1	4.878	
3	2	4.902	

**STEP 2** Calculate differences

For each hand grip, enter the formula for the difference of the actual and ideal lengths in the appropriate cell in column C.

	A	B	C
1	Grip	Length (inches)	Difference
2	1	4.878	=B2-5
3	2	4.902	=B3-5

After you enter a formula, the cell should display the difference of the length of the grip and the ideal length. For example, C2 should display  $-0.122$ , and C3 should display  $-0.098$ .

### DRAW CONCLUSIONS

- The manufacturer will consider a hand grip acceptable if the absolute value of the difference of the actual length and the ideal length is at most 0.125 inch. How many hand grips from the batch are acceptable?
- What are the least and greatest possible lengths that a hand grip can have and still be acceptable? *Explain* your reasoning.
- For which of the ten hand grips is the length closest to the ideal length? How can you tell from the differences in column C?
- In another batch of ten hand grips, the actual lengths (in inches) are 4.871, 5.019, 5.112, 4.987, 5.067, 4.899, 4.859, 5.132, 5.126, and 5.093. Create a spreadsheet to find the difference of the actual length and the ideal length for each hand grip.