Activity Overview

By now, you've been introduced to the basics of using formulas to perform calculations for data analysis. In this activity, you will edit the Bakery Sales spreadsheet you created earlier in the Hands-On activity: Introduction to Google Sheets. You will revisit the data and review the new data, then use formulas to calculate key metrics and gain insights. By the time you complete this activity, you will be more familiar with using simple formulas to analyze and extract meaningful information from datasets. Knowing how to use formulas in spreadsheet applications is an essential skill for any data analyst, as they help you automate calculations, make data-driven decisions, and save time.

Step-By-Step Instructions

Follow the instructions to complete each step of the activity. Then answer the question at the end of the activity before going to the next course item.

Step 1: Access the spreadsheet

To get started, determine which software you'd like to use, such as Google Sheets or Microsoft Excel. You will also need the updated Bakery Sales March 2020 spreadsheet, which has new data that was not in the previous activity.

To use the template for this course item, click the link below and select "Use Template."

Template: Bakery Sales March 2020

OR

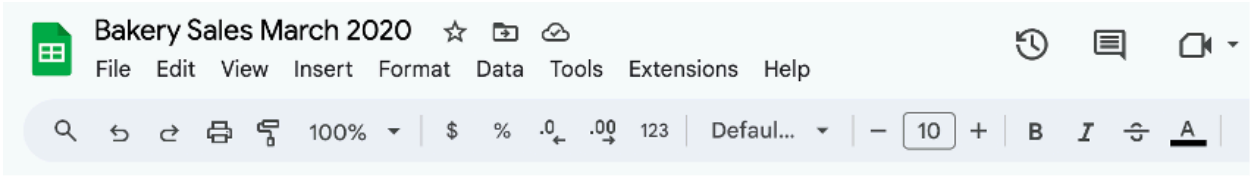
If you don't have a Google account, download the template directly from the attachment below.

Bakery Sales March 2020

XLSX File

Step 2: Edit an existing preadsheet

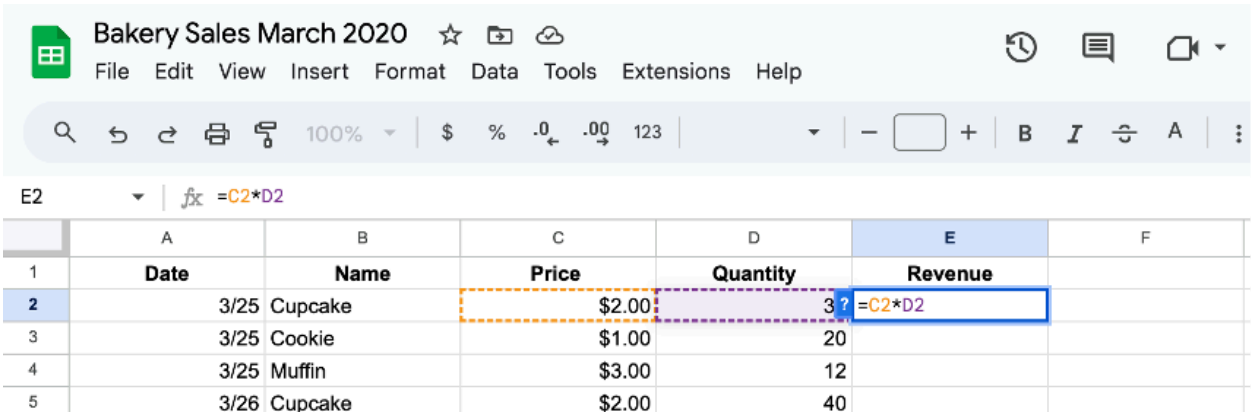
The new Bakery Sales March 2020 spreadsheet has been updated with the sales data from the local bakery for the remaining days of the month. In this activity, you'll use formulas to calculate essential metrics that reveal the revenue generated by each product. This data analysis will provide valuable insights into the local bakery's performance.



	A	B	C	D	E	F
1	**Date**	**Name**	**Price**	**Quantity**		
2	3/25	Cupcake	$2.00	30		
3	3/25	Cookie	$1.00	20		
4	3/25	Muffin	$3.00	12		
5	3/26	Cupcake	$2.00	40		
6	3/26	Pie	$5.00	15		
7	3/27	Cupcake	$2.00	35		
8	3/27	Cookie	$1.00	25		
9	3/27	Muffin	$3.00	14		
10	3/28	Cupcake	$2.00	32		
11	3/28	Pie	$5.00	16		
12	3/29	Cupcake	$2.00	38		
13	3/29	Cookie	$1.00	22		
14	3/29	Muffin	$3.00	13		
15	3/30	Cupcake	$2.00	36		
16	3/30	Pie	$5.00	17		
17	3/31	Cupcake	$2.00	39		
18	3/31	Cookie	$1.00	24		
19	3/31	Muffin	$3.00	15		
20	3/31	Pie	$5.00	18		
21	3/31	Cupcake	$2.00	41		
22	3/31	Cookie	$1.00	26		

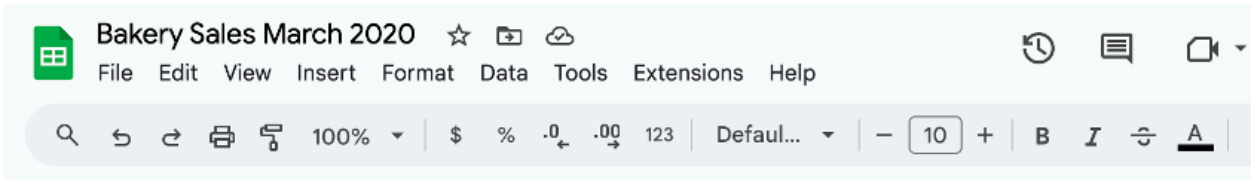
The local bakery manager wants to know how many of each product was sold and how much revenue each product brought in during this sales period. To find the answers, follow these steps:

1. Create a new attribute named Revenue in cell E1. Bold and center this column name like you did previously.
2. To calculate the revenue for the 30 cupcakes sold on 3/25, select cell E2. Next, multiply the number of cupcakes sold by the price of each cupcake. Enter `=C2*D2` and press Enter.



	A	B	C	D	E	F
1	Date	Name	Price	Quantity	Revenue	
2	3/25	Cupcake	$2.00	3	=C2*D2	
3	3/25	Cookie	$1.00	20		
4	3/25	Muffin	$3.00	12		
5	3/26	Cupcake	$2.00	40		

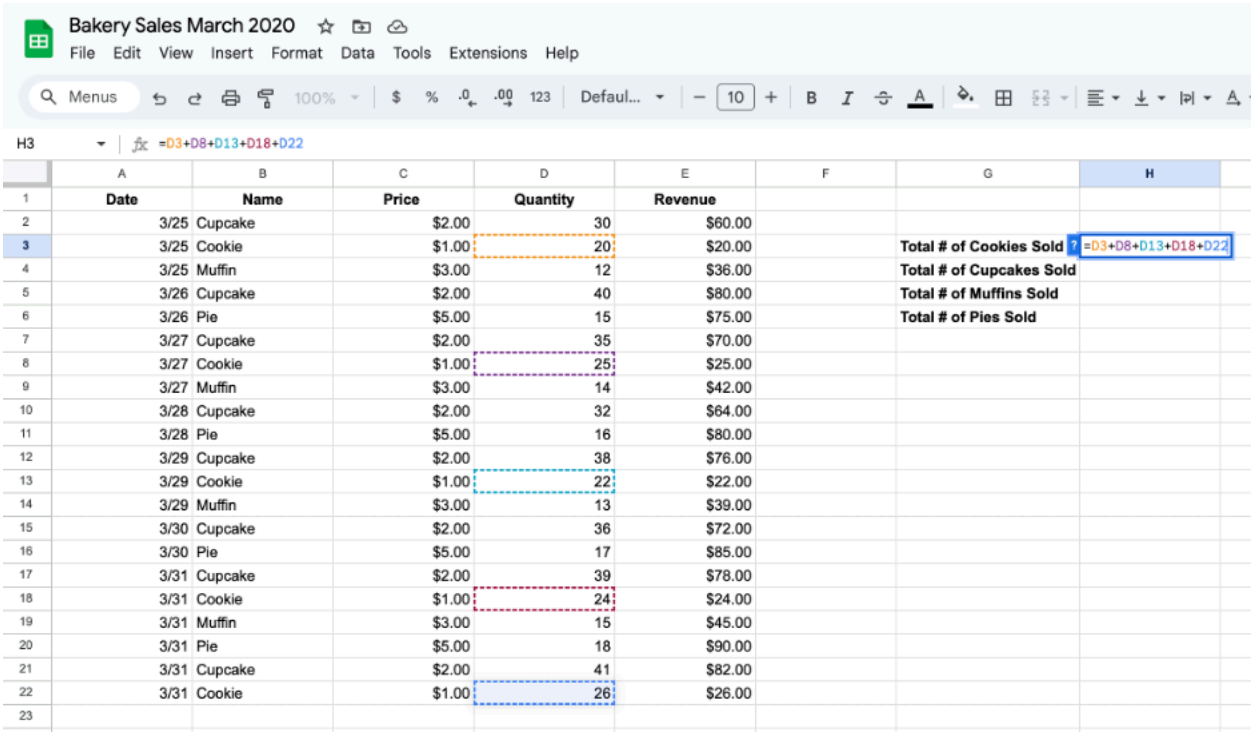
3. Copy the formula (or use the fill handle) from cell E2 to E3:E22.



	A	B	C	D	E	F
1	Date	Name	Price	Quantity	Revenue	
2	3/25	Cupcake	$2.00	30	$60.00	
3	3/25	Cookie	$1.00	20	$20.00	
4	3/25	Muffin	$3.00	12	$36.00	
5	3/26	Cupcake	$2.00	40	$80.00	
6	3/26	Pie	$5.00	15	$75.00	
7	3/27	Cupcake	$2.00	35	$70.00	
8	3/27	Cookie	$1.00	25	$25.00	
9	3/27	Muffin	$3.00	14	$42.00	
10	3/28	Cupcake	$2.00	32	$64.00	
11	3/28	Pie	$5.00	16	$80.00	
12	3/29	Cupcake	$2.00	38	$76.00	
13	3/29	Cookie	$1.00	22	$22.00	
14	3/29	Muffin	$3.00	13	$39.00	
15	3/30	Cupcake	$2.00	36	$72.00	
16	3/30	Pie	$5.00	17	$85.00	
17	3/31	Cupcake	$2.00	39	$78.00	
18	3/31	Cookie	$1.00	24	$24.00	
19	3/31	Muffin	$3.00	15	$45.00	
20	3/31	Pie	$5.00	18	$90.00	
21	3/31	Cupcake	$2.00	41	$82.00	
22	3/31	Cookie	$1.00	26	$26.00	

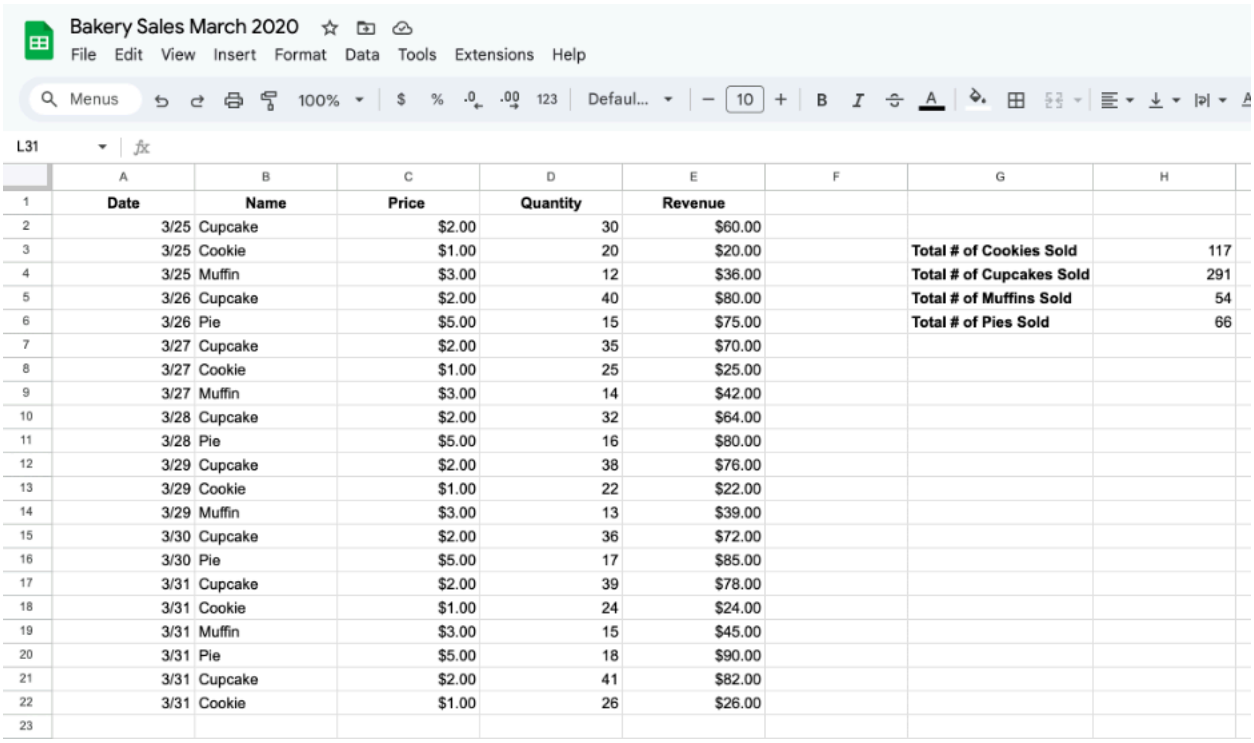
4. To find the total number of each product sold, first calculate the total quantity of each one. Start by making the data clear and easy to read. In cell G3, enter Total # of Cookies Sold. In cell G4, enter Total # of Cupcakes Sold. In cell G5, enter Total # of Muffins Sold. In cell G6, enter Total # of Pies Sold.

5. Now, calculate the total quantity of cookies sold. Select cell H3, enter `=D3+D8+D13+D18+D22` and press Enter.



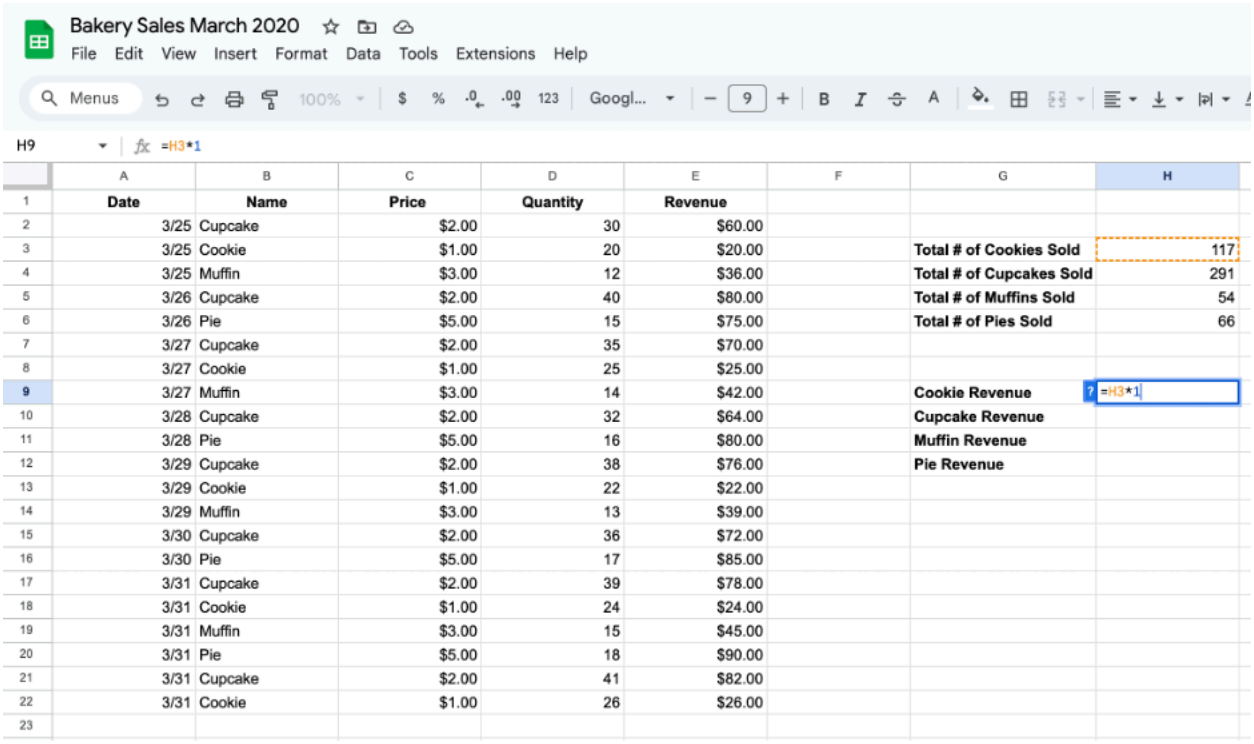
	A	B	C	D	E	F	G	H
1	**Date**	**Name**	**Price**	**Quantity**	**Revenue**			
2	3/25	Cupcake	$2.00	30	$60.00			
3	3/25	Cookie	$1.00	20	$20.00		**Total # of Cookies Sold**	=D3+D8+D13+D18+D22
4	3/25	Muffin	$3.00	12	$36.00		**Total # of Cupcakes Sold**	
5	3/26	Cupcake	$2.00	40	$80.00		**Total # of Muffins Sold**	
6	3/26	Pie	$5.00	15	$75.00		**Total # of Pies Sold**	
7	3/27	Cupcake	$2.00	35	$70.00			
8	3/27	Cookie	$1.00	25	$25.00			
9	3/27	Muffin	$3.00	14	$42.00			
10	3/28	Cupcake	$2.00	32	$64.00			
11	3/28	Pie	$5.00	16	$80.00			
12	3/29	Cupcake	$2.00	38	$76.00			
13	3/29	Cookie	$1.00	22	$22.00			
14	3/29	Muffin	$3.00	13	$39.00			
15	3/30	Cupcake	$2.00	36	$72.00			
16	3/30	Pie	$5.00	17	$85.00			
17	3/31	Cupcake	$2.00	39	$78.00			
18	3/31	Cookie	$1.00	24	$24.00			
19	3/31	Muffin	$3.00	15	$45.00			
20	3/31	Pie	$5.00	18	$90.00			
21	3/31	Cupcake	$2.00	41	$82.00			
22	3/31	Cookie	$1.00	26	$26.00			
23								

6. Then, calculate the total quantity of cupcakes, muffins, and pies sold by using the same steps.



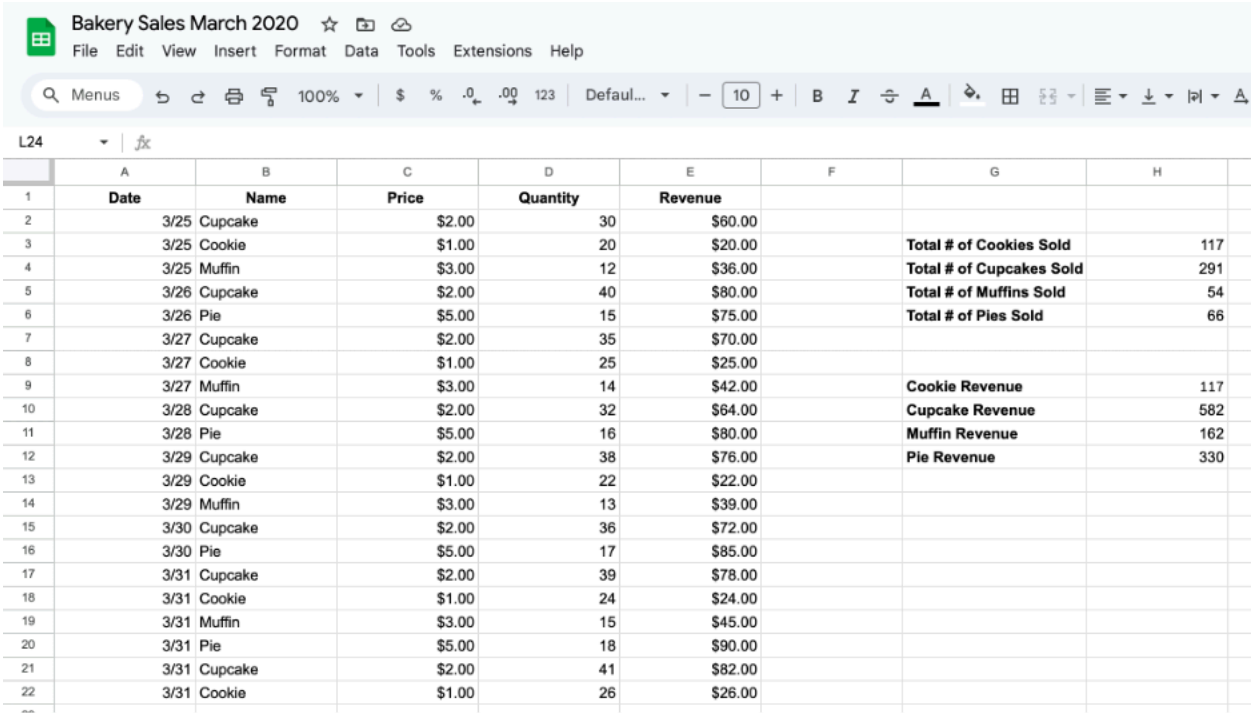
	A	B	C	D	E	F	G	H
1	**Date**	**Name**	**Price**	**Quantity**	**Revenue**			
2	3/25	Cupcake	$2.00	30	$60.00			
3	3/25	Cookie	$1.00	20	$20.00		**Total # of Cookies Sold**	117
4	3/25	Muffin	$3.00	12	$36.00		**Total # of Cupcakes Sold**	291
5	3/26	Cupcake	$2.00	40	$80.00		**Total # of Muffins Sold**	54
6	3/26	Pie	$5.00	15	$75.00		**Total # of Pies Sold**	66
7	3/27	Cupcake	$2.00	35	$70.00			
8	3/27	Cookie	$1.00	25	$25.00			
9	3/27	Muffin	$3.00	14	$42.00			
10	3/28	Cupcake	$2.00	32	$64.00			
11	3/28	Pie	$5.00	16	$80.00			
12	3/29	Cupcake	$2.00	38	$76.00			
13	3/29	Cookie	$1.00	22	$22.00			
14	3/29	Muffin	$3.00	13	$39.00			
15	3/30	Cupcake	$2.00	36	$72.00			
16	3/30	Pie	$5.00	17	$85.00			
17	3/31	Cupcake	$2.00	39	$78.00			
18	3/31	Cookie	$1.00	24	$24.00			
19	3/31	Muffin	$3.00	15	$45.00			
20	3/31	Pie	$5.00	18	$90.00			
21	3/31	Cupcake	$2.00	41	$82.00			
22	3/31	Cookie	$1.00	26	$26.00			
23								

7. The bakery manager would also like to know how much revenue each product brought in.
8. Start by making the data clear and easy to read. In cell G9, enter Cookie Revenue. In cell G10, enter Cupcake Revenue. In cell G11, enter Muffin Revenue. In cell G12, enter Pie Revenue.
9. To calculate the total revenue of the cookies, multiply the total number of cookies sold by the price of each cookie.
10. Select cell H9, enter `=H3*1`, and press Enter.



	A	B	C	D	E	F	G	H
1	**Date**	**Name**	**Price**	**Quantity**	**Revenue**			
2	3/25	Cupcake	$2.00	30	$60.00			
3	3/25	Cookie	$1.00	20	$20.00		**Total # of Cookies Sold**	117
4	3/25	Muffin	$3.00	12	$36.00		**Total # of Cupcakes Sold**	291
5	3/26	Cupcake	$2.00	40	$80.00		**Total # of Muffins Sold**	54
6	3/26	Pie	$5.00	15	$75.00		**Total # of Pies Sold**	66
7	3/27	Cupcake	$2.00	35	$70.00			
8	3/27	Cookie	$1.00	25	$25.00			
9	3/27	Muffin	$3.00	14	$42.00		**Cookie Revenue**	=H3*1
10	3/28	Cupcake	$2.00	32	$64.00		**Cupcake Revenue**	
11	3/28	Pie	$5.00	16	$80.00		**Muffin Revenue**	
12	3/29	Cupcake	$2.00	38	$76.00		**Pie Revenue**	
13	3/29	Cookie	$1.00	22	$22.00			
14	3/29	Muffin	$3.00	13	$39.00			
15	3/30	Cupcake	$2.00	36	$72.00			
16	3/30	Pie	$5.00	17	$85.00			
17	3/31	Cupcake	$2.00	39	$78.00			
18	3/31	Cookie	$1.00	24	$24.00			
19	3/31	Muffin	$3.00	15	$45.00			
20	3/31	Pie	$5.00	18	$90.00			
21	3/31	Cupcake	$2.00	41	$82.00			
22	3/31	Cookie	$1.00	26	$26.00			
23								

11. Finally, calculate the revenue of the remainder of the products (cupcakes, muffins, and pies) sold by using the same steps.



Bakery Sales March 2020

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	A	B	C	D	E	F	G	H
1	**Date**	**Name**	**Price**	**Quantity**	**Revenue**			
2	3/25	Cupcake	$2.00	30	$60.00			
3	3/25	Cookie	$1.00	20	$20.00		**Total # of Cookies Sold**	117
4	3/25	Muffin	$3.00	12	$36.00		**Total # of Cupcakes Sold**	291
5	3/26	Cupcake	$2.00	40	$80.00		**Total # of Muffins Sold**	54
6	3/26	Pie	$5.00	15	$75.00		**Total # of Pies Sold**	66
7	3/27	Cupcake	$2.00	35	$70.00			
8	3/27	Cookie	$1.00	25	$25.00			
9	3/27	Muffin	$3.00	14	$42.00		**Cookie Revenue**	117
10	3/28	Cupcake	$2.00	32	$64.00		**Cupcake Revenue**	582
11	3/28	Pie	$5.00	16	$80.00		**Muffin Revenue**	162
12	3/29	Cupcake	$2.00	38	$76.00		**Pie Revenue**	330
13	3/29	Cookie	$1.00	22	$22.00			
14	3/29	Muffin	$3.00	13	$39.00			
15	3/30	Cupcake	$2.00	36	$72.00			
16	3/30	Pie	$5.00	17	$85.00			
17	3/31	Cupcake	$2.00	39	$78.00			
18	3/31	Cookie	$1.00	24	$24.00			
19	3/31	Muffin	$3.00	15	$45.00			
20	3/31	Pie	$5.00	18	$90.00			
21	3/31	Cupcake	$2.00	41	$82.00			
22	3/31	Cookie	$1.00	26	$26.00			

Reflection

In this activity, you used formulas to calculate the total number of products sold of each type and the total revenue of each. In the space provided below, write 2-3 sentences (40-60 words) to respond to each of the following questions:

- Which product did the bakery sell most? Would you recommend any changes to the sales strategy of the bakery based on this information?
- Which product generated the most revenue for the bakery? Based on this finding, what actions would you recommend that the bakery take in order to improve its profitability?
- Consider how you used formulas in this activity. In what ways will formulas enhance your effectiveness as a data analyst? What are the advantages of formulas for data analysis?

Sold Most: Cupcake, it is 55% of sales but 49% of revenue. To change strategy we need gross profit
Most Revenue: Cupcake, but gross profit is better data than revenue. Cost of Goods Sold could change this
This would have been a good exercise to include and practice absolutes and for more advance students SUMIF