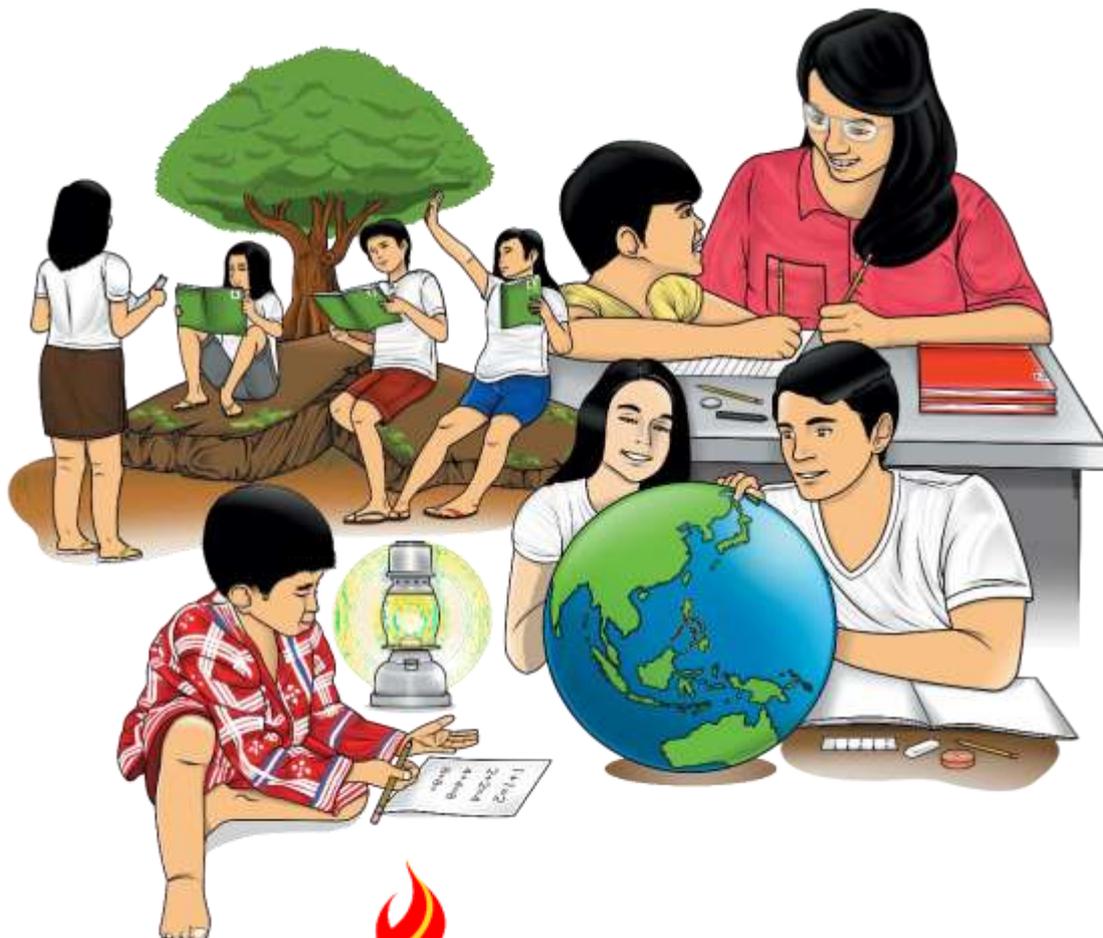


Empowerment Technologies

Quarter 1- Module 4.2: Applied Productivity Tools using Spreadsheet



**Empowerment Technologies
Alternative Delivery Mode
Quarter 1- Module 4.2: Applied Productivity Tools using Spreadsheet
First Edition, 2020**

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Published by the Department of Education
Secretary: Leonor Magtolis Briones
Undersecretary: Diosdado M. San Antonio

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Printed in the Philippines by _____

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Empowerment Technologies

Quarter 1 – Module 4.2: Applied Productivity Tools using Spreadsheet

Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

This module was designed and written with you in mind. It is here to help you applied productivity tools with basic and advanced application techniques. The scope of this module permits to be used in many different learning situations. The language used recognize the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

The module is divided into three lessons, namely:

- Lesson 1 – Working with Word Processor
- Lesson 2 – Working with Spreadsheets
- Lesson 3 – Working with Slides

Learning Competencies and Codes:

1. Uses common productivity tools effectively by maximizing advanced application techniques. CS_ICT11/12-ICTPT-Ic-d-4
2. Creates an original or derivative ICT content to effectively communicate or present data or information related to specific professional tracks. CS_ICT11/12-ICTPT-Ic-d-5

After going through this module, you are expected to:

1. Explain what a spreadsheet is.
2. Create a table of data and format it using Microsoft Excel.

Recognize the importance of using Microsoft Excel.



What I Know

Directions: Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. Harold wants to drag select cells A1 to D7. How can he accomplish this?
 - A. Long press Alt then click A1 then click D7.
 - B. Select A1 then D7 while pressing shift
 - C. Type A1:D7 in the formula bar
 - D. Press Ctrl + A.
2. What is the formula that will subtract the contents of the cells A7 to A8?
 - A. A7 - A8
 - B. = A7 - A8
 - C. A7 - A8 =
 - D. =SUM (A7:A8)
3. How can you create a new tab in Windows Excel?
 - A. In the ribbon, select Home>Tabs>Add Tabs then input how many you like to add.
 - B. Press Ctrl + A then press Ctrl + Shift + n.
 - C. You can't add tabs in Microsoft Excel.
 - D. In lower portion of the work area, press the plus button besides the tabs.
4. How to format a cell that will automatically add a peso sign?
 - A. Select the cell or cells you want to edit then press Insert > Symbol > More Symbols. Scroll down and look for the peso sign then press insert.
 - B. Select the cell or cells you like to add formatting. Press right click then click Symbol > More Symbols. Scroll down and look for the peso sign then press insert.
 - C. In the ribbon, select the Home tab then click Format Cells. In the Number tab, click Currency then in the dropdown box search for the peso sign symbol.
 - D. Select the cell or cells you like to add formatting press right click then Format Cells. Then in the Number tab, click Currency then in the dropdown box search for the peso sign symbol.
5. What computer program that gives the user the ability to create tables and edit their values.
 - A. Presentation
 - B. Word
 - C. Spreadsheet
 - D. Outlook
6. Which Ribbon Menu is needed to be selected to change the font?
 - A. Home
 - B. Insert
 - C. Page Layout
 - D. Cell Formatting
7. How do you resize a column or width?
 - A. Select the cell the press right click, select format cell then change height and width values.
 - B. In the Formula bar type (h[value]:w[value]).
 - C. Click the cell then in the ribbon select format cell then change height and width values.
 - D. Click and drag the column or row heading

8. How do you change formula style in a sheet?
 - A. Click Insert > Cell Formatting > Table Format > Table Style
 - B. Click Home > Format as Table > Table Style
 - C. Click Cell Formatting > Format Table > Table Style
 - D. You have to select each cell then add cell borders to each of them

9. What is the formula that will add the contents of the cells C1 and C10?
 - A. C1 + C10
 - B. = C1 + C10
 - C. C1 + C10 =
 - D. SUM (C1:C3)

10. Which Ribbon Menu is needed to add a Chart?
 - A. Home
 - B. Insert
 - C. Page Layout
 - D. Cell Formatting

11. How do you resize a graph?
 - A. Click the graph then click and drag any of the handles in the edges of the graph.
 - B. Select the table then press right click, a window will appear, select the Width change the value desired then select height change the value desired.
 - C. Select the table the press Ctrl + Arrow Keys.
 - D. You can't change the size of graphs.

12. How do you rename a graph into "First Data" in Microsoft Excel?
 - A. Press right click then select rename, a window will appear then type "First Data".
 - B. Press Ctrl + A then Ctrl + R, rename the chart to "First Data"
 - C. Double click the name of the chart and type "First Data".
 - D. Graph names can't be changed as they follow the name from the selected data

13. What is the purpose of the Formula Bar?
 - A. It allows an easy to see input box for formula in a cell
 - B. It is a selection of shortcuts different formula in Microsoft Excel
 - C. It is the formula that allows computation of values from different cells.
 - D. The Formula Bar is a label below the cell that indicates the result of a formula

14. How do you assign which cell the formula = (A1 + A2) + A3 will be displayed on?
 - A. On the formula bar type cell address
 - B. Press right click then select Cell Format then click on the Formula tab, type which cell you want that formula will be displayed
 - C. Click Cell Formatting then select the formula then type where it will displayed.
 - D. Type the formula where you want it to be displayed on.

15. With this formula = *Expense!*C12, what does the **Expense!** part means?
 - A. It a variable that allows quick reference of a value.
 - B. It is formula label, allowing the user to manage all the formula.
 - C. It indicates that the c12 to be displayed is on the sheet Expense
 - D. This is not a proper use of the formula.

Lesson

2

Working with Spreadsheet

The ability to organize data to a usable information is an important skill you need to learn. Spreadsheet applications like Microsoft Excel and Google Spreadsheets allow large set or group of data to be stored, organized, analyzed and interpreted automatically.



What's In

This lesson will focus on the advanced use of spreadsheet applications. In creating a basic budgeting application, you will create a presentable basic budgeting application where you can input financial data, as your output. You will be able to create a spreadsheet application using the following:

- Cell Formatting
- Conditional Formatting
- Advance Formulas
- Linked Tales.

Microsoft Excel will be used in the following activities. You may also use Google Slides, OpenOffice and Libre Office with minor changes in the steps



What's New

My Expenses

Open a spreadsheet. Record or write your daily expenses within a week. Specify the expense, the amount, and the date it is made. Follow the given example as your reference.

Example: MY DAILY EXPENSES

DAY 1 - July 06, 2019 (Sunday)

Food (Snacks) –	Php 20
School Supplies –	Php 30

Day 2 – July 07, 2019 (Monday)

Transport Allowance –	Php 20
Food (Lunch) –	Php 35
Computer Shop -	Php 15

Continue until Day 7



What is It

Formatting the Spreadsheet

1. In your desktop, create a document named '***My Weekly Budget***'. Always **Remember** to save your progress by pressing Ctrl + S.
2. Create an additional tab by clicking the plus icon in the sheets tab below. (as shown by a red box in Figure 2.1)

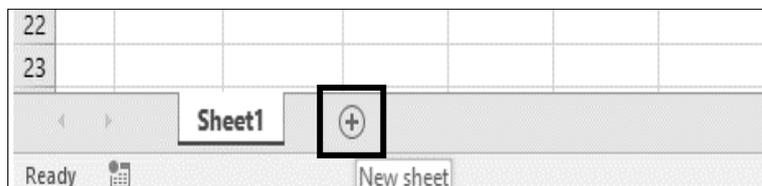


Figure 2.1: Adding new sheets

3. Rename ***Sheet1*** by double click its name and change it to ***Income***. Do the same with ***Sheet2*** and change it to ***Expense***. (see Figure 2.2)



Figure 2.2: Renaming Sheets

4. Select the ***Income*** tab and type the following data as seen in Figure 2.3. Then click the ***Expense*** tab and type the following data as seen in Figure 2.3

	A	B	C	D	E	F	G
1	EXPENSE	DATE	AMOUNT				
2	Rent/mortgage	January 3, 2019	1000				
3	Electric	January 5, 2019	1200				
4	Car Gasoline	January 5, 2019	1000				
5	Cellphone Load	January 5, 2019	500				
6	Food	January 10, 2020	3000				
7	Groceries	January 10, 2019	3200				
8	Car Loan Payment	January 16, 2019	5000				
9	Credit Cards	January 16, 2019	1020				
10	Insurance	January 16, 2019	1500				
11	Personal care	January 20, 2019	600				
12	Entertainment	January 20, 2019	500				
13	Miscellaneous	January 20, 2019	480				
14	Car Expenses	January 22, 2019	2000				
15	Business Expenses	January 29, 2019	6000				
16							

Figure2.3: Expense Tab

- To adjust the cell width or height, click and drag the edge of the column or row heading respectively as seen in Figure 2.4

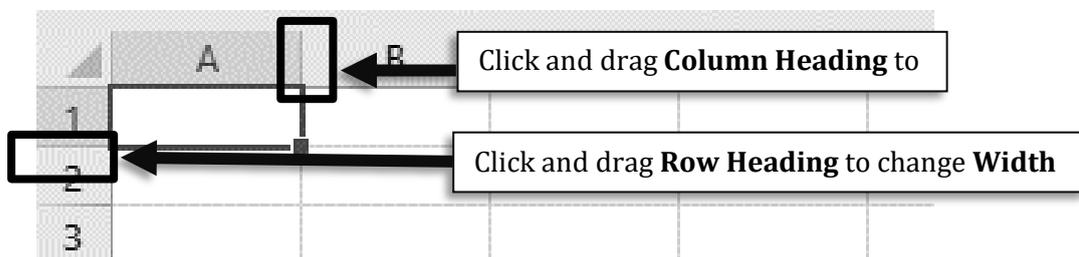


Figure 2.4: Adjusting Column

- Go to the **Income** tab, then drag select cells **A1** to **C1**. While the **A1** to **C3** cells are selected, in the ribbon click **Home > Center** then click **Home > Bold** as seen in Figure 2.5. Do the same for the **Expense** tab.

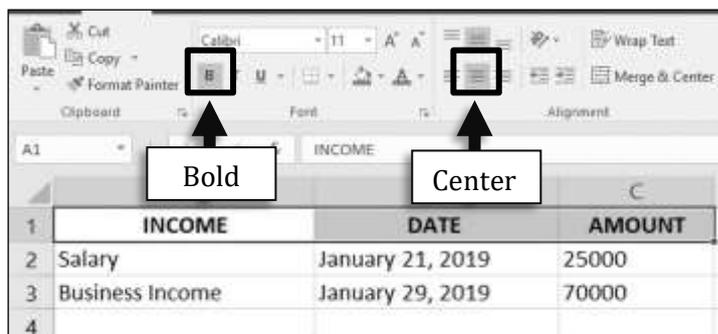


Figure 2.5: Bold and Center

NOTE:

Drag Selection

You drag select by clicking on the first cell while pressing shift key, then click the second cell specified. Particularly in Figure 2.4 you can do this on **A1** then, while pressing shift, press **C1**.

- In the **Expense** tab, drag select from **A1** to **C15** then from the ribbon, click **Home > Format as Table > Table Style Light 9** as specified in Figure 2.2. A prompt will appear as seen in Figure 2.6 that validates the selection range, then press **OK**. Do the same to **A1** to **C3** in the **Income** tab but use **Table Style Light 10** instead.

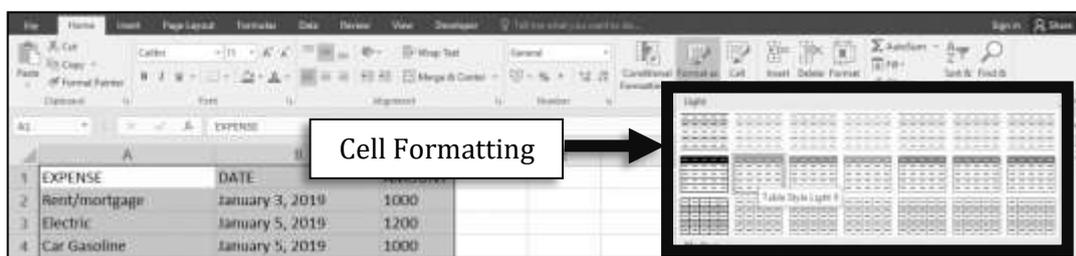


Figure 2.6: Cell Format Selection Pan

- In the **Expense** tab, drag select **C2** to **C16**, press right click > **Format Cells** (see Figure 2.7), the **Format Cell Window** will appear.

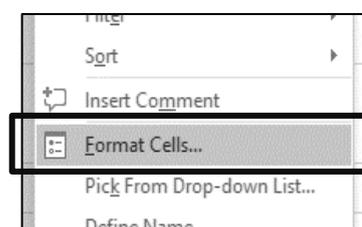


Figure 2.7 Format Cell

9. **Format Cell Window** will appear. In the **Number** tab, press **Currency** and search in the dropdown box for the Peso sign symbol (**₱**) or **PHP**. Change decimal places to **0** then press **OK**. (see Figure 2.8)

10. Do *steps 8 and 9* for **C2 to C4** to the **Income** tab.

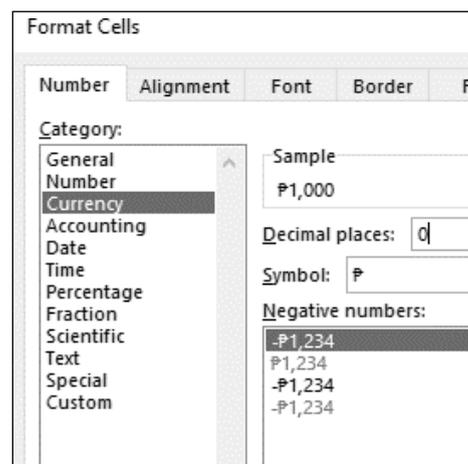


Figure 2.8 Format Cell Window

Report Summarization

1. In the **Income** tab, click **C4** then type **=SUM(C2:C3)**. This will automatically compute the sum of cells **C2** to **C3** as seen in Figure 2.9

Do the same for the **Expense** tab, but use the code **=SUM(C2:C15)** instead.

	A	B	C	D
1	Financial Summary			
2				
3	Total Monthly Income			
4	Total Monthly Expenses			
5	Cash Remaining			

Figure 2.9 Format Cell Window

2. Create another tab, rename it **Report Summary**.

3. In **Report Summary** tab, type the data as seen in Figure 2.9. Notice the space between **A1** and **A3**.

4. Select **A1**, then in the **Home** tab in the ribbon, edit the following: (see Figure 2.10)

- Bold**
- Change Font Size to **15**.
- Change Fill Color to **Green**.
- Change Font Color to **White**.
- Center**

5. Drag select **A3** to **A5** then click **Home > Bold**.

6. Select **B3** then type **=Income!C4**, this will display the content of **C4** in the **Income** tab. (see Figure 2.11)

7. Do the same with **B4** but type **=Expense!C12**.

8. Select **B5**, then type **=B3-B4** as seen in Figure 2.12. This formula will display the difference between **B4** and **B3**.

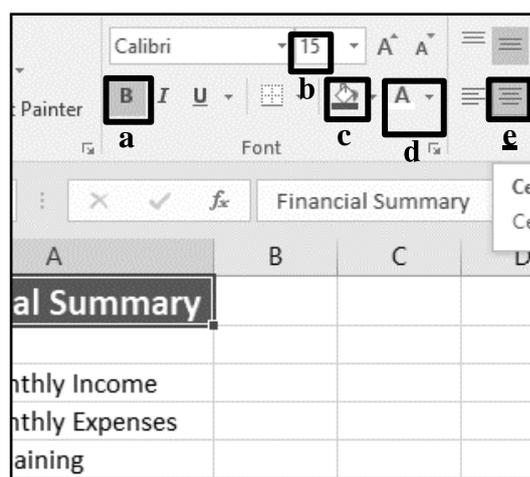


Figure 2.9 Text settings and Formatting

	A	B
1	Financial Summary	
2		
3	Total Monthly Income	32000
4	Total Monthly Expenses	27000

Figure 2.11: Total Income

	A	B	C
1	Financial Summary		
2			
3	Total Monthly Income	32000	
4	Total Monthly Expenses	27000	
5	Cash Remaining	5000	

Figure 2.12 Total

9. Drag select **B3** to **B5**, press right click > **Format Cells**, the **Format Cell Window** will appear. In the **Number Tab**, press **Currency** and search in the dropdown box for the Peso sign symbol (**₱**) or **PHP** as seen in Figure 2.8, press **OK**.

Table Creation

1. To create a graph, drag select **A3** to **B4** then press **Insert> Insert Pie or Doughnut Chart** as seen in Figure 2.13.

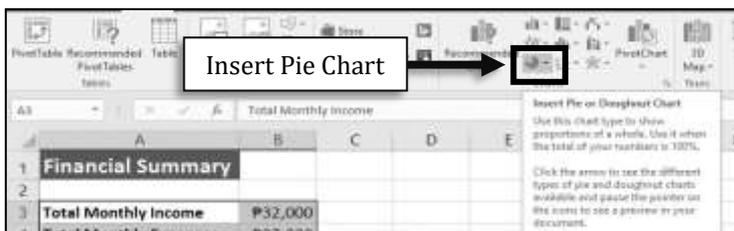


Figure 2.13: Insert Pie Chart

2. Double click on the Title of the graph and change it into **FINANCIAL SUMMARY PIE GRAPH** as seen in Figure 2.14.

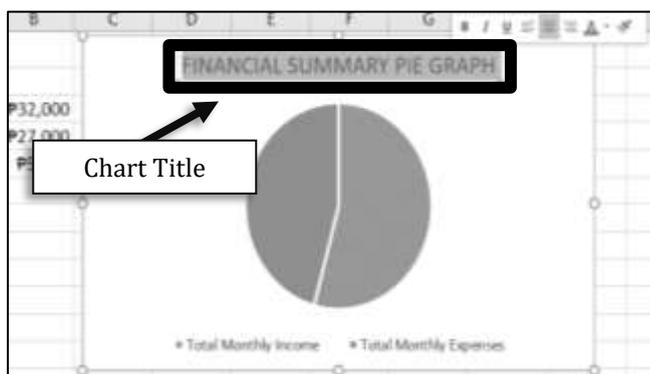


Figure 2.14 Chart Renaming

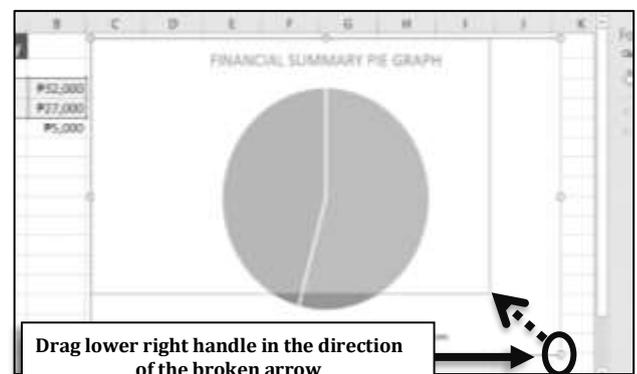


Figure 2.15: Table Resize

3. To resize the graph, click and drag the lower rightmost handle then move the mouse to the left as seen in Figure 2.15. Any handles can be used in this purpose as long as you drag away from the handle you clicked.

- To move the graph, hover on the edge of the chart then click and drag it anywhere you want it to move.

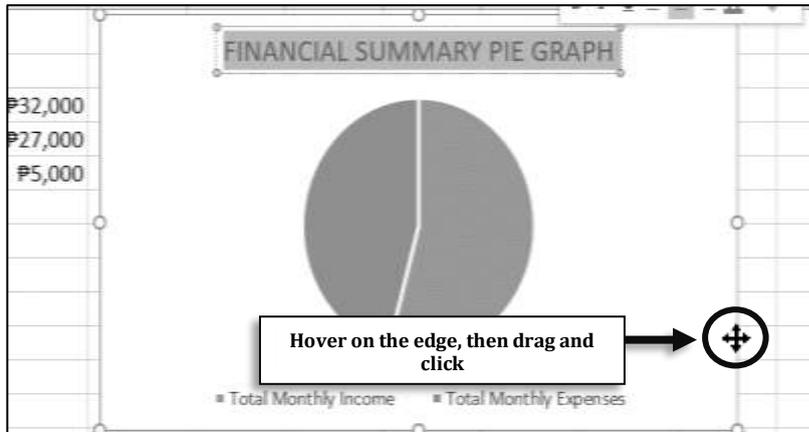
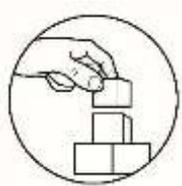


Figure 2.15: Moving a Table



What's More

Activity 1.1 Jose's Budgeting

Jose, a college working student, wants to create a budgeting spreadsheet application for a month's worth of financial activity. Create a similar Budgeting Spreadsheet Application following the lesson discussed earlier with the data provided in Figure 2.16. It must have two (2) tabs namely **Allowance & Expense** and **Summary**.

A	B	C	D
Income	Amount	Expense	Amount
Parent's Allowance	₱500	Food	₱850
Salary	₱5,000	Transport	₱700
Extra Income	₱300	Dormitory	₱1,000
	₱5,800	School Expenses	₱1,750
		School Supplies	₱250
		Misc.	₱500
			₱5,050

Figure 2.16: Jose's Budgeting Data

The **Allowance & Expense** tab contains Jose's source of income and its amount as well as his expenses and amount. Follow the formatting as seen in Figure 2.16.

The **Summary** tab must contain a summary of the total income, expense, and the remaining money along with the pie chart. This is similar to what you did in the discussion.

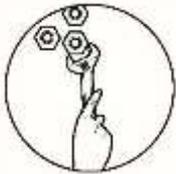


What I Have Learned

In a piece of paper, write a narrative on what you have learned based on the following concepts:

1. How does a Spreadsheet application improve the presentation of your data?

2. What is the main advantage of using a Spreadsheet in terms of organizing and sorting data?



What I Can Do

My Budgeting Application

Using data from the previous activity in the lesson **My Expenses**, create a similar Budgeting Spreadsheet Application. It must have three (3) tabs namely: ***Allowance, Expense*** and ***Budget Summary***. Like the activity earlier, ***Allowance tab*** contains your source allowance (and income if any) and its amount. The ***Expense*** tab contains different expenses and their amount. The ***Budget Summary*** tab must contain a summary of the total income, expense and the remaining money.



Assessment

Directions: Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. Based on the activities, what is the use of a Spreadsheet software?
 - A. It allows the data to be stored, organized and analyzed.
 - B. It gives the user the ability to create tables.
 - C. It enables users to record words and numbers.
 - D. It is a software that allows input, editing, formatting and output of text

2. How can you create a new tab in Windows Excel?
 - A. In the ribbon, select Home>Tabs>Add Tabs then input how many tab you like to add.
 - B. In lower portion of the work area, press the plus button besides the tabs.
 - C. Press Ctrl + A then press Ctrl + Shift + N.
 - D. You can't add tabs in Microsoft Excel.

3. Harold wants to drag select cells A1 to D7. How can he accomplish this?
 - A. Long press Alt then click A1 then click D7.
 - B. While pressing shift select the A1 then D7
 - C. In the formula bar type *A1:D7*
 - D. Press Ctrl + A.

4. What is the formula that will subtract the contents of the cells A7 and A8?
 - A. $A7 - A8$
 - B. $= A7 - A8$
 - C. $A7 - A8 =$
 - D. $=SUM (A7:A8)$

5. How to format a cell that will automatically add a peso sign?
 - A. Select the cell or cells you want to edit then press Insert > Symbol > More Symbols. Scroll down and look for the peso sign then press insert.
 - B. Select the cell or cells you like to add formatting. Press right click then click Symbol > More Symbols. Scroll down and look for the peso sign then press insert.
 - C. In the ribbon, select the Home tab then click Format Cells. In the Number tab, click Currency then in the dropdown box search for the peso sign symbol.
 - D. Select the cell or cells you like to add formatting press right click then Format Cells. Then in the Number tab, click Currency then in the dropdown box search for the peso sign symbol.

6. How do you resize a column or width?
 - A. Select the cell the press right click, select format cell then change height and width values.
 - B. In the Formula bar type (h[value]:w[value]).
 - C. Click the cell then in the ribbon select format cell then change height and width values.
 - D. Click and drag the column or row heading.

7. What is the formula that will add the contents of the cells C1 and C10?
 - A. C1 + C10
 - B. = C1 + C10
 - C. C1 + C10 =
 - D. SUM (C1:C3)

8. How do you resize a graph?
 - A. Click the graph then click and drag any of the eight handles in the edges of the graph.
 - B. Select the table then press right click, a window will appear, select the Width change the value desired then select height change the value desired.
 - C. Select the table the press Ctrl + Arrow Keys.
 - D. You can't change the size of graphs.

9. How do you rename a graph into "First Data" in Microsoft Excel?
 - A. Press right click then select rename, a window will appear then type "First Data".
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 - B. Press right click then select Cell Format then click on the Formula tab, type which cell you want that formula will be displayed
 - C. In the ribbon click Cell Formatting then select the formula then type where it will displayed.
 - D. Type the formula where you want it to be displayed on.

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 - D. Cell Formatting

14. With this formula = **Expense!**C12, what does the **Expense!** part means?
 - A. It a variable that allows quick reference of a value.
 - B. It is formula label, allowing the user to manage all the formula.
 - C. It indicates that the c12 to be displayed is on the sheet Expense
 - D. This is not a proper use of the formula.

15. How do you change formula style in a sheet?
- A. Click Insert > Cell Formatting > Table Format > Table Style
 - B. Click Home > Format as Table > Table Style
 - C. Click Cell Formatting > Format Table > Table Style
 - D. You have to select each cell then add cell borders to each of them



Additional Activities

Explore and Expand: Using the link/QR code reader/scanner provided, study the Basic Formula guides (*Seven Basic Excel Formulas for Your Workflow*). Create a new excel document called '*Formulas*' and accomplish the following:

1. In cell **A6**, output the **AVERAGE** of **A1** to **A5**.
2. Count how many cells has numbers from **B1** to **B9** display the answer in **B10**.
3. Count how many cells has inputs (regardless if it is text or number) from **C1** to **C9** display the answer in **C10**.
4. In cell **D2**, it will display whatever is in Cell **D1**.



<https://corporatefinanceinstitute.com/resources/excel/study/basic-excel-formulas-beginners/>



Answer Key

<p>Assessment</p> <p>1. A 2. B 3. B 4. B 5. D 6. D 7. B 8. A 9. C 10. A 11. A 12. D 13. B 14. C 15. B</p>	<p>What I Know</p> <p>1. C 2. B 3. D 4. D 5. C 6. A 7. D 8. B 9. B 10. B 11. A 12. C 13. A 14. D 15. C</p>
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