

Mathematics 4

Microlearning Module

QUARTER 1 – Module 13

*Adding Numbers and Subtracting
Numbers With and Without
Regrouping*



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Microlearning Module (MLM)

Quarter 1 – Module 13: Adding and Subtracting Numbers With and Without Regrouping

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MICROLEARNING MODULE

Name: _____ Grade & Sec: _____ Score: _____

Subject: Mathematics Quarter: 1 MLM No 13

Teacher: _____

Competency: Add numbers with sums up to 1 000 000 and subtract numbers where both numbers are less than 1 000 000, with and without regrouping

A. Look Back!

1. Solve for the actual sum and then the estimated sum by rounding to the nearest ten thousands.

a) 135 753 → _____	b) 824 435 → _____
275 931 → _____	633 663 → _____
+ 377 452 → _____	+ 355 228 → _____
_____ → _____	_____ → _____
<i>Actual Sum</i>	<i>Estimated Sum</i>

2. Estimate the difference by rounding the number to the nearest ten thousands.

c) 28 263 → _____	d) 51 679 → _____
- 12 917 → _____	- 37 059 → _____
_____	_____
e) 85 946 → _____	
- 63 296 → _____	

B. What's New?

Read the passage below.

For the month of June, Happy Food Cooperative had a total sales of ₱123,224 for the first week, ₱112,312 for the second week, ₱121,212 for the third week, and ₱320,141 for the fourth week. What was the total sale for the four weeks?



C. What Is It?

1. Adding Numbers Without Regrouping

What should we do to solve the problem above?

To find the answer to the problem above, we need to add all the sales for the four weeks. The mathematical sentence is $123\ 224 + 112\ 312 + 121\ 212 + 320\ 141 = n$ where n is the total sales for four weeks.

To find the sum, you must first write the numbers in a column.

Follow the steps by looking at the table below. Let's do it!

Add the ones	Add the tens	Add the hundreds	Add the thousands	Add the ten thousands	Add the hundred thousands
123 224	123 224	123 224	123 224	123 224	123 224
112 312	112 312	112 312	112 312	112 312	112 312
121 212	121 212	121 212	121 212	121 212	121 212
<u>+ 320 141</u>	<u>+ 320 141</u>	<u>+ 320 141</u>	<u>+ 320 141</u>	<u>+ 320 141</u>	<u>+ 320 141</u>
9	89	889	6 889	76 889	676 889

The total sales for four weeks are ₱ 676,889.

2. Subtracting Numbers Without Regrouping

Read the following:



Vegetable Store

A local vegetable dealer has a gross income of ₱793,486. They spent only ₱61,154 on their operations. How much is their net income?

We can get the answer by subtraction. In subtracting large numbers without regrouping, we begin at the ones place going to the left.

Study the example that follows:

Write the numbers in column and

1. Subtract the ones place. \longrightarrow Subtract 4 from 6 equals 2
2. Subtract 5 tens from 8 tens \longrightarrow The difference is 3 tens
3. Subtract 1 hundreds from 4 hundreds \longrightarrow Equals 3 hundreds
4. Subtract 1 thousands from 3 thousands \longrightarrow Equals 2 thousands
5. Subtract 6 ten thousands from 9 ten thousands \longrightarrow Equals 3 ten thousands
6. Bring down 7 thousands since there is no more to subtract. That is your final answer \longrightarrow

$$\begin{array}{r} \overleftarrow{\text{---}} \text{---} \text{---} \text{---} | \\ \text{P}793,486 \\ - \text{P}61,154 \\ \hline \text{P}732,332 \end{array}$$

Their net income is P732,332

3. Adding Numbers with Regrouping

Below are the monthly sales of Me-anne's Drug Store:

Month	Sales
January	P 105,127
February	103,243
March	107,365
April	104,248
May	112,364

What is the total sales?

Let's solve it. Here's how:

Write the numbers in column and

- a. Add the numbers in ones place: $7+3+5+8+4=27$, write 7 in ones column and regroup 2 in tens place

←	---	---	---	---
	2	1	2	2
₱	105,127			
	103,243			
	107,365			
	104,248			
	+ 112,364			↓
₱	532,347			

- Add the numbers in tens place: $2+2+4+6+4+6 = 24$, write 4 in the tens column and regroup 2 in hundreds place
- Add the numbers in hundreds place: $2+1+2+3+2+3=13$, write 3 and regroup 1 in the thousands place
- Add the numbers in the thousands place: $1+5+3+7+4+2=22$, write 2, and regroup 2 in the ten thousands place
- Add the numbers in the ten thousands place: $2+0+0+0+0+3=3$, no number to regroup
- Add the numbers in the hundred thousands place: $1+1+1+1+1=5$


The total sales for 5 months is ₱532,347.

4. Subtracting Numbers with Regrouping:

When subtracting numbers, follow these simple steps:

- Step 1. Align the digits properly by writing all the ones, tens, hundreds, and thousands in their respective columns.
- Step 2. Start subtracting from the rightmost place to the leftmost place.
- Step 3. Regroup whenever the digit in the subtrahend is greater than the digit in the minuend.

Read and study the solution to the problem:

	<p style="text-align: center;">Carrots Delivery</p> <p>A total of 9,547 pieces of carrots were delivered to a store. Early in the morning, 658 pieces were sold. How many pieces of carrots were left unsold?</p>
---	--

Solve: $9\ 547 - 658 = n$

Subtract the ones. Regroup	Subtract the tens. Regroup	Subtract the hundreds. Regroup	Subtract the thousands. Regroup
$\begin{array}{r} ^3 ^{17} \\ 9 5 \cancel{4} \cancel{7} \\ - 6 5 8 \\ \hline 8 8 9 \end{array}$	$\begin{array}{r} ^{13} \\ ^4 \cancel{9} \cancel{4} \cancel{7}^{17} \\ - 6 5 8 \\ \hline 8 9 \end{array}$	$\begin{array}{r} ^{14} ^{13} \\ ^8 \cancel{9} \cancel{5} \cancel{4} \cancel{7}^{17} \\ - 6 5 8 \\ \hline 8 8 9 \end{array}$	$\begin{array}{r} ^{14} ^{13} \\ ^8 \cancel{9} \cancel{5} \cancel{4} \cancel{7}^{17} \\ - 6 5 8 \\ \hline 8 8 8 9 \end{array}$

The method above explains how to subtract numbers with regrouping. The minuend is 9 547, and the subtrahend, or the number to be subtracted, is 658. The difference is 8 889.

So, 8 889 pieces of carrots were still not sold yet.

C. Let's try!

Solve the following using appropriate strategies:

1) $\begin{array}{r} 141\,002 \\ + 212\,211 \\ \hline \end{array}$ <input type="text"/>	2) $\begin{array}{r} 252\,101 \\ + 112\,222 \\ \hline \end{array}$ <input type="text"/>	3) $\begin{array}{r} 302\,101 \\ + 321\,421 \\ \hline \end{array}$ <input type="text"/>
--	--	--

4) $\begin{array}{r} 201\,121 \\ + 30\,112 \\ \hline \end{array}$ <input type="text"/>	5) $\begin{array}{r} 223\,310 \\ + 223\,003 \\ \hline \end{array}$ <input type="text"/>
---	--

6) $\begin{array}{r} 284\,764 \\ - 153\,311 \\ \hline \end{array}$ <input type="text"/>	7) $\begin{array}{r} 253\,579 \\ - 20\,165 \\ \hline \end{array}$ <input type="text"/>	8) $\begin{array}{r} 149\,665 \\ - 17\,412 \\ \hline \end{array}$ <input type="text"/>
--	---	---

9.) $\begin{array}{r} 828\,325 \\ - 223\,124 \\ \hline \end{array}$ <input type="text"/>	10.) $\begin{array}{r} 723\,546 \\ - 511\,323 \\ \hline \end{array}$ <input type="text"/>
---	--

Write the digits in column, then solve.

- 11) $128\ 435 + 10\ 932 + 35\ 812 + 225\ 173 =$ _____
- 12) $120\ 147 + 364\ 172 + 147\ 261 + 137\ 481 =$ _____
- 13) $251\ 112 + 213\ 123 + 231\ 321 + 302\ 140 =$ _____
- 14) $825\ 432 - 657\ 323 =$ _____
- 15) $723\ 546 - 281\ 289 =$ _____

Solve the following.

- 16) $725\ 685 -$ _____ $= 211\ 471$
- 17) What is $148\ 846$ increased by $206\ 409$? $=$ _____
- 18) Take away $564\ 210$ from $843\ 421 =$ _____
- 19) Put together: $226\ 114$, $331\ 021$, $110\ 223$ and $220\ 331 =$ _____
- 20) A number $622\ 423$ added to $324\ 232$ gives a result of _____

D. Let's Evaluate

1) Write the digits in column, then solve.

- a) $320\ 112 + 210\ 312 + 121\ 221 + 220\ 223 =$ _____
- b) $221\ 000 + 242\ 231 + 202\ 223 + 112\ 203 =$ _____
- c) $287\ 196 - 163\ 164 =$ _____
- d) $279\ 654 - 59\ 431 =$ _____
- e) $151\ 112$ more than the sum of $131\ 321$ and $340\ 140 =$ is _____
- f) $754\ 683$ reduced by $310\ 521 =$ _____

2) Solve for the answer.

g) $142\ 347$	h) $243\ 263$	i) $512\ 245$	j) $713\ 424$
$246\ 102$	$144\ 421$	$- 46\ 578$	$- 235\ 746$
$101\ 263$	$123\ 261$	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>	<div style="border: 1px solid black; width: 100px; height: 20px;"></div>
$+ 200\ 121$	$+ 432\ 103$		
<div style="border: 1px solid black; width: 120px; height: 20px;"></div>	<div style="border: 1px solid black; width: 120px; height: 20px;"></div>		

CHALLENGE

A. Fill in the missing numbers in the puzzles below:

This is how the puzzle works:

To get the total, we add the numbers.

(Number 1 + Number 2)

To get the difference, we subtract the numbers. (Number 1 and Number 2 in any possible order)



<p>1</p> <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -10px; left: 50%; transform: translate(-50%, -100%);">72 423</div> <div style="position: absolute; bottom: -10px; left: 50%; transform: translate(-50%, -100%);">52 735</div> <div style="position: absolute; left: 10px; top: 50%; transform: translateY(-50%); border: 1px solid green; width: 60px; height: 30px;"></div> <div style="position: absolute; left: 25%; top: 50%; transform: translateY(-50%);">+</div> <div style="position: absolute; left: 35%; top: 50%; transform: translateY(-50%);">-</div> <div style="position: absolute; right: 10px; top: 50%; transform: translateY(-50%); border: 1px solid red; width: 60px; height: 30px;"></div> </div> </div>	<p>2</p> <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -10px; left: 50%; transform: translate(-50%, -100%);">81 756</div> <div style="position: absolute; bottom: -10px; left: 50%; transform: translate(-50%, -100%);">13 512</div> <div style="position: absolute; left: 10px; top: 50%; transform: translateY(-50%); border: 1px solid green; width: 60px; height: 30px;"></div> <div style="position: absolute; left: 25%; top: 50%; transform: translateY(-50%);">+</div> <div style="position: absolute; left: 35%; top: 50%; transform: translateY(-50%);">-</div> <div style="position: absolute; right: 10px; top: 50%; transform: translateY(-50%); border: 1px solid red; width: 60px; height: 30px;"></div> </div> </div>
<p>3</p> <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -10px; left: 50%; transform: translate(-50%, -100%);">342 168</div> <div style="position: absolute; bottom: -10px; left: 50%; transform: translate(-50%, -100%);"></div> <div style="position: absolute; left: 10px; top: 50%; transform: translateY(-50%); border: 1px solid green; width: 60px; height: 30px; text-align: center;">571 329</div> <div style="position: absolute; left: 25%; top: 50%; transform: translateY(-50%);">+</div> <div style="position: absolute; left: 35%; top: 50%; transform: translateY(-50%);">-</div> <div style="position: absolute; right: 10px; top: 50%; transform: translateY(-50%); border: 1px solid red; width: 60px; height: 30px;"></div> </div> </div>	<p>4</p> <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -10px; left: 50%; transform: translate(-50%, -100%);"></div> <div style="position: absolute; bottom: -10px; left: 50%; transform: translate(-50%, -100%);">223 507</div> <div style="position: absolute; left: 10px; top: 50%; transform: translateY(-50%); border: 1px solid green; width: 60px; height: 30px;"></div> <div style="position: absolute; left: 25%; top: 50%; transform: translateY(-50%);">+</div> <div style="position: absolute; left: 35%; top: 50%; transform: translateY(-50%);">-</div> <div style="position: absolute; right: 10px; top: 50%; transform: translateY(-50%); border: 1px solid red; width: 60px; height: 30px; text-align: center;">452 061</div> </div> </div>

B. Study the following table, and answer the questions that follow:

Fruit Sales in Sikat Market (In Kg)	
Mang Juan's Fruit Stall	288 708
Green Valley Gardens	173 692
Mt. Matutum Producers	215 311
Nanay Soleng's Fruit Stand	194 324

1) How many kilograms were the total sales of the Sikat Market?

2) What is the sum of the highest and lowest sales? _____

3) What is the difference between the highest and the lowest sales? _____

4) Combine the sales of Mang Juan's Fruit Stall and Green Valley Gardens, then compare it with the total sales of Mt. Matutum Producers and Nanay Soleng's Fruit Stand.

a. Which combination is greater? _____

b. By how many kilograms is it greater than the other combination? _____

E. References

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REGION XII - DIVISION OF SULTAN KUDARAT

Math Grade 4 Q1 LC13

ANSWERS KEY

A. Look Back

1. Estimate the sum to the nearest ten thousand and find the exact sum.

$$\begin{array}{r} \text{a) } 135\,753 \rightarrow 140\,000 \\ 275\,931 \rightarrow 280\,000 \\ + 377\,452 \rightarrow 380\,000 \\ \hline 789\,136 \rightarrow 800\,000 \end{array}$$

Actual Sum Estimated Sum

$$\begin{array}{r} \text{b) } 824\,435 \rightarrow 820\,000 \\ 633\,663 \rightarrow 630\,000 \\ + 355\,228 \rightarrow 360\,000 \\ \hline 1\,813\,326 \rightarrow 1\,810\,000 \end{array}$$

Actual Sum Estimated Sum

2. Estimate the difference by rounding the number to the nearest ten thousands.

$$\begin{array}{r} \text{c) } 28\,263 \rightarrow 30\,000 \\ - 12\,917 \rightarrow 10\,000 \\ \hline 20\,000 \end{array}$$

$$\begin{array}{r} \text{d) } 51\,679 \rightarrow 50\,000 \\ - 37\,059 \rightarrow 40\,000 \\ \hline 10\,000 \end{array}$$

$$\begin{array}{r} \text{e) } 85\,946 \rightarrow 80\,000 \\ - 63\,296 \rightarrow 60\,000 \\ \hline 20\,000 \end{array}$$

C. Let's Try!

1. 976 648
2. 987 948
3. 897 769
4. 668 567
5. 858 658
6. 131 453
7. 233 414
8. 132 253
9. 605 201
10. 212 223
11. 400 352
12. 769 061
13. 997 696
14. 168 109
15. 442 257
16. 514 214
17. 355 255
18. 279 211
19. 887 689
20. 946,655

D. Let's Evaluate!

- a. 871 868
- b. 777 657
- c. 535 696
- d. 124 032
- e. 622 573
- f. 444 162
- g. 689 833
- h. 943 048
- i. 465 667
- j. 477 678

*Challenge

A.

1. 125 158(+)
19 688(-)
2. 95 268 (+)
68 244 (-)
3. 229 161(Number 2)
113 007 (-)
4. 675 568(Number 1)
899 075 (+)

B

1. 872 035
2. 462 400
3. 115 016
4. Mang Juan's Fruit Stall and Green Valley Gardens, by 52 765