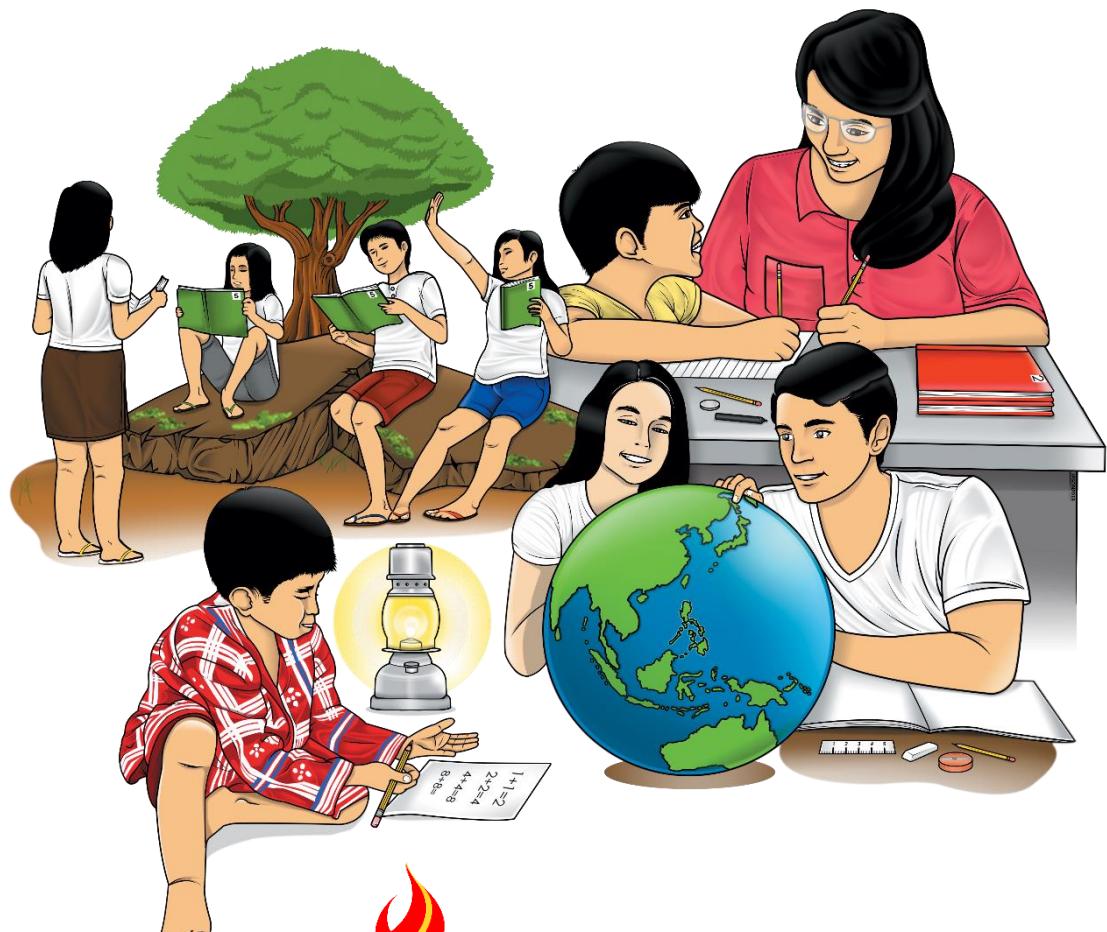


Mathematics

Quarter 1 – Module 10:

Estimates the Sum of 3 to 4- Digit Addends



Mathematics – Grade 3

Alternative Delivery Mode

Quarter 1 – Module 10: Estimates the Sum of 3 to 4-Digit Addends

First Edition, 2020

Republic Act 8293, section 176 states that: No copyright shall subsist in any work of the Government of the Philippines. However, prior approval of the government agency or office wherein the work is created shall be necessary for exploitation of such work for profit. Such agency or office may, among other things, impose as a condition the payment of royalties.

Borrowed materials (i.e., songs, stories, poems, pictures, photos, brand names, trademarks, etc.) included in this module are owned by their respective copyright holders. Every effort has been exerted to locate and seek permission to use these materials from their respective copyright owners. The publisher and authors do not represent nor claim ownership over them.

Published by the Department of Education

Secretary: Leonor Magtolis Briones

Undersecretary: Diosdado M. San Antonio

Development Team of the Module

Author: Vanessa Mae A. del Monte

Editors: Arnel S. Zaragosa, Jeremias C. Ceniza, Gina F. Silvestre, Ph.D., Elma C. Prudente, Annie Fel Lingatong, Edgardo Dondon S. Lorenzo, Ailyn V. Ponce

Reviewers: Helen C. Ugay, Angeline A. Dayaganon, Christopher U. Gonzales

Emery E. Aquino, Pelicardo R. Pantaleon Jr., Menard M. Arenas

Illustrators: Dennis Macaubos, Alfie Valenteros, Christian Loyd Alfuerto, Pit Ybanez

Management Team: Allan G. Farnazo Alona C. Uy

Mary Jeanne B. Aldeguer Maria Gina F. Flores

Analiza C. Almazan Arnel S. Zaragosa

Ma. Cielo D. Estrada Jeremias C. Ceniza

Maria Liza I. Berandoy Illuminado T. Boiser

Printed in the Philippines by _____

Department of Education – Region XI

Office Address: F. Torres St., Davao City

Telefax: (082) 291-1665; (082) 221-6147

E-mail Address: region11@deped.gov.ph * lrms.regionxi@deped.gov.ph

3

Mathematics

Quarter 1 – Module 10:
Estimates the Sum of 3- to 4-Digit
Addends

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 master on estimating the sum of 3 to 4- digit addends with reasonable results. The scope of this module permits it to be used in many different learning situations. The language used recognizes your diverse vocabulary backgrounds. 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 Mathematics Grade 3 learning materials you are using.

After going through this module, you are expected to:

1. Estimate the sum of 3 to 4- digit addends with reasonable results (**M3NS-Ie-31**).

Enjoy your journey. Good luck!



What I Know

Choose the letter of the correct answer. Write the chosen letter on a separate sheet of paper.

1. What is the estimated sum for $896 + 325$?
a. 1 000 b. 1 100 c. 1 125 d. 1 200
2. What is the estimated sum for $2 465 + 5 325 + 5 678$?
a. 13 000 b. 12 000 c. 11 000 d. 10 000
3. Carol's trip in Cebu City includes round trip ticket worth ₱8 548.00 and hotel accommodation worth ₱12 645.00. About how much is her expenses for the trip?
a. ₱ 20 000 b. ₱ 21 000 c. ₱ 22 000 d. ₱ 23 000
4. Which of the following has an estimated sum of 5,000?
a. $2 500 + 1 500 + 2 028$
b. $1125 + 3 472 + 954$
c. $1 800 + 2 100 + 1 700$
d. $995 + 2 670 + 1 998$
5. Orlie and Olly save money in the bank. Orlie has a deposit of ₱4 807 while Olly has ₱2 356. Approximately, how much is the savings of the two boys in the bank?
a. ₱ 5 000
b. ₱ 6 000
c. ₱ 7 000
d. ₱ 8 000

Lesson

Estimates the Sum of 3 to 4- Digit Addends with Reasonable Results

In this module, you will be able to learn how to estimate the sum of 3 to 4- digit addends with reasonable results.

Estimation is the process of finding an estimate, or approximation of which the value is closer to the exact answer. It is an important skill to compute things easily and determine the reasonableness of one's solution.

In real life, estimation is part of our daily activities. When you are at the supermarket and trying to stay within a budget, you can estimate the cost of the items that you are going to buy without using any calculator so that you will not go beyond your budget. You can also reasonably estimate time and distances, for example, about how long does it take for you to get from one place to another.



What's In

Before learning how to estimate, let us review the most important skill needed in estimating, the concept of rounding off whole numbers.

Steps in rounding off whole numbers.

- 1.) Identify the digit to be rounded off.
- 2.) Look at the digit at the right of the digit to be rounded off.
 - i.) If the digit is 0,1,2,3, or 4 copy the digit to be rounded off then all the digits at the right will be 0.
 - ii.) If the digit is 5,6,7,8, or 9 add 1 to the digit to be rounded off then all the digits at the right will be 0.

Activity 1

Round the numbers to the nearest:

	Hundreds	Thousands
1.) 228	_____	4.) 8 732
2.) 356	_____	5.) 5 429
3.) 984	_____	6.) 1 356



What's New

In solving word problem, the clue that the problem is about estimating if the following key words appear: **about**, **estimate** and **approximately**.

Activity 2

Study the table below then answer the questions that follow.

Carlo, a balot vendor, recorded his earnings for five days.

Day	Amount
Monday	₱ 645
Tuesday	₱ 1 424
Wednesday	₱ 526
Thursday	₱ 798
Friday	₱ 1 523

- 1.) About how much were Carlo's earnings on Monday and Tuesday?
- 2.) What is the approximate earnings of Carlo on Wednesday and Thursday?

- 3.) About how much was Carlo's earnings in five days?
- 4.) What is the actual sum of Carlo's earnings in five days?



Notes to the Teacher

This part will let the readiness of the learner on estimation. Use the discovery method in activating prior knowledge. The learner will be able to assess his/her answer in Activity 2 as the learner proceeds the course of this module.



What is It

In estimating sums, follow the steps below.

Example:

1. Estimate the sum of $276 + 814 + 325 + 956$.

Step 1 Round off the addends to the hundreds place.

$$\begin{array}{r} 276 & \rightarrow & 300 \\ + \quad 814 & \rightarrow & 800 \\ \quad 325 & \rightarrow & 300 \\ \underline{956} & \rightarrow & 1\,000 \end{array}$$

Step 2 Add the rounded off numbers.

$$\begin{array}{r} 300 \\ + 800 \\ 300 \\ \hline 1000 \\ 2400 \end{array}$$

The estimated sum is 2 400.

Estimate the sum of 897 + 8 175 + 5 525.

Step 1 Round off the addends to the thousands place.

$$\begin{array}{rcl} 897 & \rightarrow & 900 \\ + 8175 & \rightarrow & 8000 \\ \hline 5525 & \rightarrow & 6000 \end{array}$$

Step 2 Add the rounded off numbers.

$$\begin{array}{r} 900 \\ + 8000 \\ \hline 6000 \\ 14900 \end{array}$$

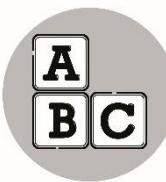
The estimated sum is 14 900.

Let us visit the table in Activity 2 showing Carlo's earnings in selling ballot for five days.

Day	Amount
Monday	₱ 645
Tuesday	₱ 1 424
Wednesday	₱ 526
Thursday	₱ 798
Friday	₱ 1 523

Compare the estimated sum and the actual sum of Carlo's earnings. How reasonable is your estimated sum compared to the actual sum?

- The estimated sum is reasonable when it is closer to the actual sum.



What's More

Activity 3

Estimate the sum.

$$\begin{array}{r} 375 \rightarrow \underline{\hspace{2cm}} \\ + 924 \rightarrow \underline{\hspace{2cm}} \\ \hline 815 \rightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 7432 \rightarrow \underline{\hspace{2cm}} \\ + 6378 \rightarrow \underline{\hspace{2cm}} \\ \hline 3529 \rightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 675 \rightarrow \underline{\hspace{2cm}} \\ + 134 \rightarrow \underline{\hspace{2cm}} \\ \hline 627 \rightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 3587 \rightarrow \underline{\hspace{2cm}} \\ + 726 \rightarrow \underline{\hspace{2cm}} \\ \hline 981 \rightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 2756 \rightarrow \underline{\hspace{2cm}} \\ + 1249 \rightarrow \underline{\hspace{2cm}} \\ \hline 5678 \rightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$



What I Have Learned

How do you estimate the sum?

- 1.) Round off first the addends to the highest place values.
- 2.) To get the estimated sum, add the rounded addends.



What I Can Do

Activity 4

Estimate the sum.

$$\begin{array}{r} 435 \\ + 678 \\ \hline 925 \end{array}$$

$$\begin{array}{r} 2987 \\ + 6873 \\ \hline 4555 \end{array}$$

$$\begin{array}{r} 359 \\ + 814 \\ \hline 207 \end{array}$$

$$\begin{array}{r} 6759 \\ + 8210 \\ \hline 7642 \end{array}$$

$$\begin{array}{r} 6428 \\ + 7154 \\ \hline 9345 \end{array}$$



Assessment

Activity 5

Multiple Choice. Choose the letter of the correct answer.

1. What is the estimated sum of 235, 556, and 428?
a.) 900 b.) 1 000 c.) 1 100 d.) 1 200

2. Which of the following shows the estimated sum of: 4 567, 2 156, and 7 213?
a.) 10 000 b.) 11 000 c.) 12 000 d.) 14 000

3. Which of the following gives an estimate of 20 000?
a.) $8\ 125 + 8\ 889 + 3\ 427$
b.) $5\ 756 + 6\ 250 + 8\ 612$
c.) $9\ 856 + 7\ 245 + 4\ 125$
d.) $5\ 555 + 4\ 218 + 8\ 975$

Solve the following problems.

4. Liza bought a second-hand laptop that costs ₦ 9 750, a printer that costs ₦ 7 150, an external drive that costs ₦ 3 500, and a headphone that costs ₦ 345. About how much did Liza pay in all?

5. Zarnel travels 2 447 m to the park, then 382 m to the store. He then travels 1634 m back to his house. Approximately, what is the total distance traveled by Zarnel?



Additional Activities

Activity 6

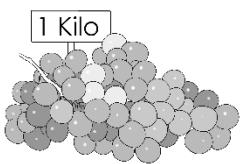
Mrs. Javier went to a grocery store. She bought the following items. Estimate how much will Mrs. Javier pay for all the groceries.



A sack of rice – ₱2 350



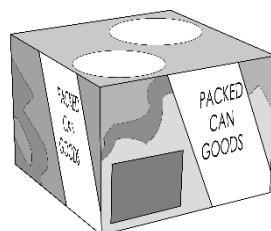
A dressed chicken – ₱ 225



A kilo of grapes - ₱ 280



A kilo of meat – ₱ 220



A pack of canned goods - ₱ 595



Answer Key

<p>What I Know</p> <p>1. D 2. A 3. C 4. B 5. C 6. C</p>	<p>What's In</p> <p>1. 200 2. 400 3. 10 000 4. 17 000 5. 9 000 6. 1 000</p>	
<p>What's More</p> <p>1. 2 100 2. 1 400 3. 10 000 4. 17 000 5. 9 000 6. 1 000</p>	<p>Assessment</p> <p>1. D 2. D 3. A 4. $\frac{21}{300}$ 5. 4400 meters 600 200 300 200 2 000 1 400 2 000 1 5000 2 2 000 1 400 2 000 3 000 2 000 2 000 3 300</p>	<p>What I Can Do</p> <p>1. 2 000 2. 200 3. 300 4. 200 5. 300 6. 200 7. 200 8. 200 9. 200 10. 200 11. 200 12. 200 13. 200 14. 200 15. 200 16. 200 17. 200 18. 200 19. 200 20. 200 21. 200 22. 200 23. 200 24. 200 25. 200 26. 200 27. 200 28. 200 29. 200 30. 200 31. 200 32. 200 33. 200 34. 200 35. 200 36. 200 37. 200 38. 200 39. 200 40. 200 41. 200 42. 200 43. 200 44. 200 45. 200 46. 200 47. 200 48. 200 49. 200 50. 200 51. 200 52. 200 53. 200 54. 200 55. 200 56. 200 57. 200 58. 200 59. 200 60. 200 61. 200 62. 200 63. 200 64. 200 65. 200 66. 200 67. 200 68. 200 69. 200 70. 200 71. 200 72. 200 73. 200 74. 200 75. 200 76. 200 77. 200 78. 200 79. 200 80. 200 81. 200 82. 200 83. 200 84. 200 85. 200 86. 200 87. 200 88. 200 89. 200 90. 200 91. 200 92. 200 93. 200 94. 200 95. 200 96. 200 97. 200 98. 200 99. 200 100. 200 101. 200 102. 200 103. 200 104. 200 105. 200 106. 200 107. 200 108. 200 109. 200 110. 200 111. 200 112. 200 113. 200 114. 200 115. 200 116. 200 117. 200 118. 200 119. 200 120. 200 121. 200 122. 200 123. 200 124. 200 125. 200 126. 200 127. 200 128. 200 129. 200 130. 200 131. 200 132. 200 133. 200 134. 200 135. 200 136. 200 137. 200 138. 200 139. 200 140. 200 141. 200 142. 200 143. 200 144. 200 145. 200 146. 200 147. 200 148. 200 149. 200 150. 200 151. 200 152. 200 153. 200 154. 200 155. 200 156. 200 157. 200 158. 200 159. 200 160. 200 161. 200 162. 200 163. 200 164. 200 165. 200 166. 200 167. 200 168. 200 169. 200 170. 200 171. 200 172. 200 173. 200 174. 200 175. 200 176. 200 177. 200 178. 200 179. 200 180. 200 181. 200 182. 200 183. 200 184. 200 185. 200 186. 200 187. 200 188. 200 189. 200 190. 200 191. 200 192. 200 193. 200 194. 200 195. 200 196. 200 197. 200 198. 200 199. 200 200. 200 201. 200 202. 200 203. 200 204. 200 205. 200 206. 200 207. 200 208. 200 209. 200 210. 200 211. 200 212. 200 213. 200 214. 200 215. 200 216. 200 217. 200 218. 200 219. 200 220. 200 221. 200 222. 200 223. 200 224. 200 225. 200 226. 200 227. 200 228. 200 229. 200 230. 200 231. 200 232. 200 233. 200 234. 200 235. 200 236. 200 237. 200 238. 200 239. 200 240. 200 241. 200 242. 200 243. 200 244. 200 245. 200 246. 200 247. 200 248. 200 249. 200 250. 200 251. 200 252. 200 253. 200 254. 200 255. 200 256. 200 257. 200 258. 200 259. 200 260. 200 261. 200 262. 200 263. 200 264. 200 265. 200 266. 200 267. 200 268. 200 269. 200 270. 200 271. 200 272. 200 273. 200 274. 200 275. 200 276. 200 277. 200 278. 200 279. 200 280. 200 281. 200 282. 200 283. 200 284. 200 285. 200 286. 200 287. 200 288. 200 289. 200 290. 200 291. 200 292. 200 293. 200 294. 200 295. 200 296. 200 297. 200 298. 200 299. 200 300. 200</p>

References

My Learning Springboard. "Math instruction." Accessed May 28, 2020. <https://mylearningspringboard.com/why-teaching-both-estimation-and-accuracy-is-important-in-math-instruction/>

Department of Education. Whole Number Additions. Last modified February 2020.
<https://www.slideshare.net/edithahonradez/lesson-guide-gr-3-chapter-i-addition-v10>

For inquiries or feedback, please write or call:

Department of Education - Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex
Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072; 8634-1054; 8631-4985

Email Address: blr.lrqad@deped.gov.ph * blr.lrpd@deped.gov.ph