



Constructing Task: Reality Checking

STANDARDS FOR MATHEMATICAL CONTENT

MCC4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

MCC4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.

MCC4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

BACKGROUND KNOWLEDGE

When students begin using the standard algorithm their explanation may be quite lengthy. After much practice with using place value to justify their steps, they will develop fluency with the algorithm. Students should be able to explain why the algorithm works. Often students mix up when to 'carry' and when to 'borrow'. Also students often do not notice the need of borrowing and just take the smaller digit from the larger one. Emphasize place value and the meaning of each of the digits.

ESSENTIAL QUESTIONS

- How can I combine hundreds, tens and ones in two or more numbers efficiently?
- What strategies help me add and subtract multi-digit numbers?
- How does the value of digits in a number help me compare two numbers?
- How can I round to help me find a reasonable answer to a problem?
- How does understanding place value help me explain my method for rounding a number to any place?

MATERIALS

- Hundreds chart or number line
- Reality Checking recording sheet

GROUPING

Individual or partner

MATHEMATICS • GRADE 4 • UNIT 1: Whole Numbers, Place Value, and Rounding in Computation

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Comments: This task provides a real world connection for students to apply the addition and subtraction strategies which help them explain the standard algorithm. Students will engage in the balancing of a mock checking account register. Students will add whole number deposits and subtract whole number withdrawals using addition and subtraction strategies such as, place value or the standard algorithm. Students will be required to explain how their understanding of place value helped add and subtract the given amounts.

Within their explanations, students should use language noting the number of hundreds, tens and ones combined and/or separated in order to determine the final balance in the register. Students will also be required to compare the amounts in the banking statement and the register for accurate balancing of the checking account.

A context problem is included to encourage students to think about the reasonableness of their answers. Students will round the determined amount based on the context, it will be important to keep students grounded in the context. Encourage them to round based on the context and not apply a procedure for rounding.

Task directions:

Students will follow the directions below from the “Reality Checking” recording sheet.

Part 1:

1. First finish subtracting the checks and adding the deposit in the check register.
2. First check off each check and deposit that are in the **check register** and checking statement from Reality Bank. This will tell you which checks and deposits cleared the bank. The check goes underneath the column that has the check in your register.
3. Write down the checks that are **in the check register and not in the bank statement**. Add up all of these checks. This tells you what checks you wrote but are still outstanding from the bank.
4. Subtract this sum from your **ending balance** on your statement.
5. Add to this balance (line 4) any **deposits** that weren't checked off. The answer that you get here should match the last balance from your check register.

Part 2:

After balancing her check register above, Marsha realized she did not include a check she received for her birthday from her grandmother. She remembers depositing the check in the bank on March 29th close to closing time. However, she cannot remember the exact amount of the check. She believes it is between \$125 and \$130 dollars. About how much will her ending balance be when she includes the amount of her birthday check?

Part 3:

After taking a financial course to help her manage her money, Marsha decided to create a monthly budget. She used her March checking register to determine how much money she spent on food, bills like car payment, phone bill, and spending at her favorite stores. Help Marsha determine in which of the three areas she spends the most money and in which she spends the least. Use what

you know about place value to explain which area uses most of her money and which area uses the least of her money.

FORMATIVE ASSESSMENT QUESTIONS

- Can you explain how you are subtracting the withdrawals from the balance? Explain how you are adding the deposits to the balance.
- What is the beginning balance in Marsha's register? What is the ending balance? Which is greater, the beginning balance or the end balance?
- How can you determine Marsha's new end balance after including the birthday check?

DIFFERENTIATION**Extension**

- Have students create a monthly budget for Marsha based on her March spending.

Intervention

- Have students use the hundreds chart or number line to aid in rounding the amount of the birthday check and new ending balance.
- Provide students with more entries for the register to require limited addition and subtraction opportunities.
- Have base-ten blocks available to help students formulate their thoughts about using place value to help add and subtract the deposits and withdrawals.

Name _____ Date _____

Reality Checking
Directions

Checking Statement
Reality Bank
March 1 - 30



Beginning Balance: \$1234.00

Deposits \$1800.00

Withdrawals \$2095.00

Ending Balance: \$939.00

Date	Check #	Amount	Balance
2- Mar	231	\$300.00	934.00
2-Mar	Deposit	\$890.00	1824.00
4-Mar	223	\$45.00	1779.00
5-Mar	221	\$35.00	1744.00
6-Mar	228	\$450.00	1294.00
7-Mar	229	\$56.00	1238.00
8-Mar	Deposit	\$910.00	2148.00
10-Mar	239	\$430.00	1718.00
13-Mar	225	\$50.00	1668.00
15-Mar	226	\$46.00	1622.00
19-Mar	237	\$52.00	1570.00
23-Mar	222	\$85.00	1485.00
25-Mar	232	\$96.00	1389.00
28-Mar	236	\$125.00	1264.00
28-Mar	224	\$325.00	939.00

Georgia Department of Education
Common Core Georgia Performance Standards Framework Teacher Edition
Fourth Grade Mathematics • Unit 1

Check No.	Date	Description of Transaction	(-)		√ O T	(+ -) other	(-) Amount of Deposit or Interest		Balance 1234.00	
221	2/15	Mr. Jones	35	00					1199	00
222	2/15	Mrs. Wilkinson	85	00					1114	00
223	2/16	Phone	45	00					1069	00
224	2/18	Car Payment	325	00					744	00
225	2/18	Insurance	50	00					694	00
226	2/20	Dr. Norris	46	00					648	00
227	2/21	Groceries	24	00					624	00
Dep	2/24	Paycheck					890	00	1514	00
228	2/26	Rent	450	00						
229	2/26	Groceries	56	00						
230	2/28	Wal-Mart	10	00						
231	2/28	K-mart	300	00						
232	2/28	Dining	96	00						
233	2/28	Cable	23	00						
234	2/28	Pizza	9	00						
235	3/1	Water	23	00						
Dep	3/1	Paycheck					910	00		
236	3/1	Books	125	00						
237	3/2	Dining	52	00						
238	3/2	Groceries	83	00						
239	3/2	Visa	430	00						

Dep	3/5	Paycheck					1123	00		
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Part

1:

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2. Write down the checks that are **in the check register and not in the bank statement**. Add up all of these checks. This tells you what checks you wrote but are still outstanding from the bank.

_____ Total: _____

3. Subtract this sum from your **ending balance** on your statement.

_____ - _____ = _____

4. Add to this balance (line 4) any **deposits** that weren't checked off. The answer that you get here should match the last balance from your check register.

_____ + _____ = _____

5. Explain how you balanced the equation in problem #5. Use what you know about place value to help you explain how you added the two amounts to make it equal the ending balance in the checking statement.

Part 2:

After balancing her check register above, Marsha realized she did not include a check she received for her birthday from her grandmother. She remembers depositing the check in the bank on March 29th close to closing time. However, she cannot remember the exact amount of the check. She believes it is between \$125 and \$130 dollars. About how much will her ending balance be when she includes the amount of her birthday check?

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