MeTEOR Performance Task Fourth Grade

Mathematics
Gi   Giving

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Performance Task Item: Gift Giving
Grade Level: Fourth Grade

Focus Area: Number and Operations in Base Ten
Essential Questions:
- When should you use mental computation and when should you use a calculator?
- Why is it important to understand the values of coins?

Core Ideas:
- Understands place value.
- Understands how to identify values of coins.
- Understands number patterns.
- Understands the use of computation to solve multi-step problems.

Learning Targets:
- Students will use place value understanding to calculate totals of coins and dollars.
- Students will identify value of coins.
- Students will identify number patterns.
- Students will solve real world problems using addition, subtraction and multiplication.
- Students will determine sales tax.
- Students will work cooperatively with math partners.
- Students will communicate mathematically their understanding of place value.

STANDARDS
Domain: Numbers and Operations in Base Ten
Content Standards:
- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division*.
- 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.
- Fluently add and subtract multi-digit whole numbers using the standard algorithm.
- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Supporting Standard:
 Speaking and Listening:
- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts,* building on others' ideas and expressing their own clearly.

Math Practice Standards:

MP 1: Make sense of problems and persevere in solving them.

MP 2: Reason abstractly and quantitatively.

MP 4: Model with mathematics.

MP 5: Use appropriate tools strategically.

MP 7: Look for and make use of structure.

Materials:
- Performance Task
- Pencil
- Paper
- Calculator
- Coins/manipulatives for those students needing them

Task/Question 1:

DOK Level 2: Basic Application of Skills and Concepts

Math Practice Standards:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 5: Use appropriate tools strategically.
- MP 7: Look for and make use of structure.

While looking at the calendar you noticed your mom, brother and best friend have birthdays coming up soon. You would love to buy each one of them a birthday gift. Your mom wants one of those fancy coffee machines to start her day off right, your brother wants an Xbox game and your best friend wants a selfie stick. How quickly can you determine if you can purchase these three items with the money you have collected?

You have saved $276.00 from mowing lawns and also have a jar with 456 coins.

A. If the coins in your jar were all pennies, what would be the total value of your coins?

B. If the coins in your jar were all dimes, what would be the total value of your coins?

C. What do you notice about the value of your coins from pennies to dimes?

D. Imagine that your coins were dollar bills instead of coins, what would be the total value of bills in your jar?

E. What if they were ten dollar bills, what would the total value be?

F. Provide an answer and explain the pattern you noticed about the value in pictures, words or numbers.

Task/Question 2:

DOK Level 2: Basic Application of Skills and Concepts

Math Practice Standards:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 5: Use appropriate tools strategically.

A. After sorting all your coins (from Task/Question 1) you discovered you have 125 quarters, 88 dimes, 101 nickels and the remainder are pennies. How many pennies do you have?

B. What is the total value of your 456 coins?

C. Write an equation comparing the amount of money in coins from your jar to the amount of money you have saved from mowing lawns ($276.00).

D. How much money do you have total to buy the three birthday gifts?

E. When should you estimate amounts of money? Is estimation a good skill to use when determining if you have enough money to buy gifts?

F. What tool did you use to help you solve this problem?

Task/Question 3:

DOK Level 2: Basic Application of Skills and Concepts

Math Practice Standards:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 4: Model with mathematics.
- MP 5: Use appropriate tools strategically.

A. After looking on Amazon and searching sale ads from local stores you discover the fancy coffee machine you want to buy your mother is on sale for $119.99, your brother's Xbox game is $49.99 and your best friends selfie stick is on sale for $15.75.

Do you have enough money to buy all three gifts? Show your work.

B. Sales tax on each item you purchased will be 8.5%. What is the total sales tax for all three items?

What is the total cost, including sales tax, for you to purchase the three gifts? Use a calculator to calculate the total.

C. Based on the total cost of the gifts, including sales tax, do you have enough money left over to buy yourself an Xbox game? Explain your answer.

Task/Question 4:

DOK Level 3: Strategic Thinking and Complex Reasoning

Math Practice Standards:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 4: Model with mathematics.
- MP 5: Use appropriate tools strategically.
- MP 7: Look for and make use of structure.

A. You decide you need to develop a plan to earn more money since you have spent a large amount of your savings on gifts. If you mow a small yard for $20.00 and a large yard for $37.00, how many lawns will you need to mow to earn ***about*** $250.00?

B. How would your scenario change if you need to earn the money back in half the time?

C. With your triangle group, discuss your mathematical thinking to earn more money. What patterns did you see, what tools and strategies did you use to solve the problem? Be prepared to share with the class your plan to earn more money mowing lawns.
My plan to earn more money:

Complete Performance Task Scoring Rubric
Gift Giving

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
Task 1:			14	
A. $4.56	1	2		
B. $45.60	1	2		
C. The value of your coins from pennies to dimes increases by 10 times the amount or a similar response about the place value increasing.	2	3		
D. $456.00 $4,560.00	1	4		
E. Individual answers will vary. (3 points for completion with correct explanation.)	2	3		
Task 2:			16	
A. 142 pennies	2	3		
B. The value of your 456 coins is $46.52	1	2		
C. $46.52 < $276.00	2	3		
D. $322.52	1	2		
E. Individual responses will vary.	2	3		
F. Answers will vary. Paper, pencil, calculator or drawing pictures will be the most common answers.	2	3		

Task 3: A. Yes I have enough money to buy the three presents. $119.99. + $49.99 + $15.75. =$185.73 B. $15.78; $201.51 C. Yes; Answers for explanations will vary.	**2** **1** **1**	**3** **2** **2**	**7**	
Task 4: A. Responses will vary for each student. Example: I need to mow 7 small lawns to earn $140.00 and 3 large lawns to earn $111.00. This will total an earnings of $251.00 which is about $250.00. B. Answers may vary. Example: Mow more lawns in a shorter amount of time. C. Total points earned for participating in group discussion and developing a viable plan.	**2** **2** **3**	**5** **3** **5**	**13**	
		TOTAL POINTS:		

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