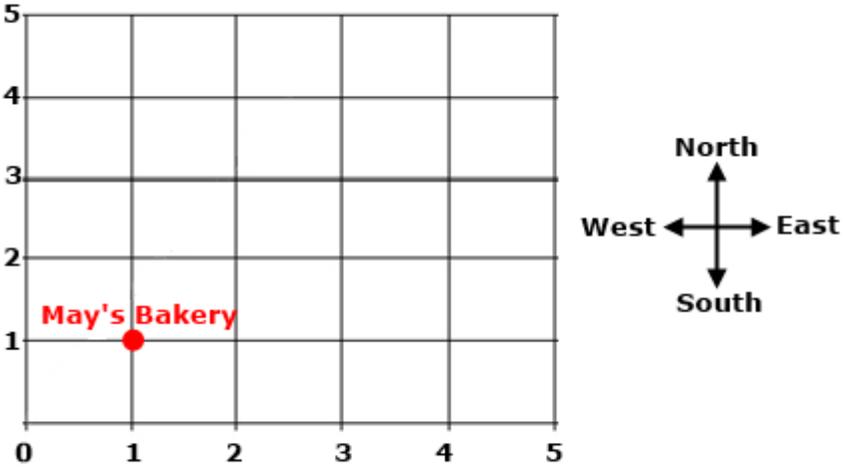
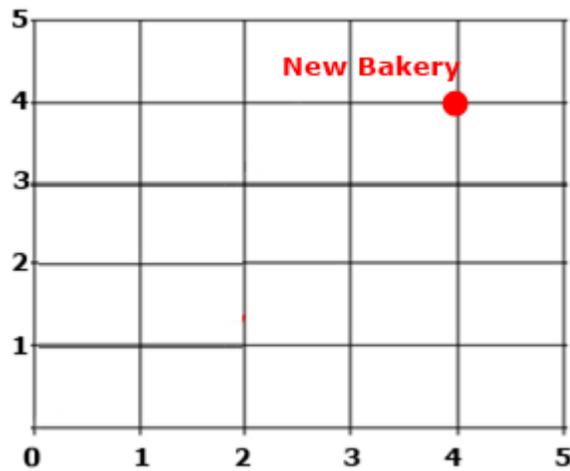


Title:	Opening a Bakery
Grade:	5
Claim(s):	<p>Claim 4: Modeling and Data Analysis Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.</p> <p>Claim 3: Communicating Reasoning Students clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.</p> <p>Claim 2: Problem Solving Students can solve a range of well-posed problems in pure and applied mathematics, making productive use of knowledge and problem-solving strategies.</p>
Assessment Target(s):	<p>Claim 4 A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.</p> <p>Claim 3 A. Test propositions or conjectures with specific examples. F. Distinguish correct logic or reasoning from that which is flawed and—if there is a flaw in the argument—explain what it is.</p> <p>Claim 2 C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flowcharts, or formulas).</p>
Standard(s):	<p>Question 1 - 5.G.2, Claim 2, Target D Question 2 - 5.NF.7a, Claim 2, Target C (pg. 28 of specs) Question 3 - 5.NBT.6, Claim 4, Target A Question 4 - 5.NBT.7, Claim 3, Target E Question 5 - 5.MD.5b, Claim 3, Target A Question 6 - 5.MD.2, Claim 4, Target D</p> <p>5.G.2, NF.7a, 5.NBT.6, 5.NBT.7, 5.MD.5b, 5.MD.2</p>
Mathematical Practice(s):	1, 2, 3, 4, 6
Revised Bloom's Taxonomy Level:	Analyzing - 4
DOK Level:	Strategic Thinking/Reasoning - 3
Score Points:	13 points possible
Difficulty:	Medium
Resources:	N/A
Notes:	N/A

Task Overview:	The student will demonstrate their knowledge of the four operations in regard to fractions, decimals, and whole numbers; calculating volume; and graphing in Quadrant I of the coordinate plane.
Teacher Preparation/Resource Requirements:	None required
Time Requirements:	Approximately 60-80 minutes

Prework:	None
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Sample Top-Score Response	<p>You have been asked to help your aunt open a new bakery. You will need to use your expertise in fractions, decimals, calculating volume, and graphing in a coordinate plane in order to help her plan out her new bakery.</p> <p>Part A</p> <p>1. The first step in planning to open a bakery is determining the location of the bakery. Your aunt decided that she wants the new bakery to be two blocks east and three blocks north of the May's Bakery, shown below.</p> <div style="text-align: center;">  </div> <p>If each square represents one block, plot the location of your aunt's new bakery in the graph below.</p>
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2. Your aunt wants to bake sample cookies before opening the bakery to get feedback from the community about her recipe. Her recipe calls for $2\frac{1}{2}$ cups of flour for every batch of cookies. Each bag of flour she orders has 54 cups of flour. What is the maximum number of complete batches of cookies your aunt can bake for this sample on one full bag of flour?

21 batches

Part B

3. You want to help your aunt plan her order for buying ingredients. Your aunt knows that she needs to buy at least 1200 chocolate chips to help with her first batch of chocolate chip cookies. If each bag contains 95 chocolate chips, how many full bags of chocolate chips will your aunt purchase to have at least 1200 chips? Explain how you know.

My aunt will need to purchase 13 bags of chocolate chips. I know this because I divided 1200 by 95 to get 12 remainder 35. Since 12 bags would not be enough chocolate chips to have 1200 total, she would need to buy 13 bags of chocolate chips to reach her 1200 total.

4. Using the amount of bags of chocolate chips found in question 3, you needed to find how much money your aunt would spend on chocolate chips. The cost of each bag of chips is \$4.39. You followed the steps below to determine that the amount spent on chocolate chips would be \$0.33.

- Find number of bags needed
- Divide number of bags by cost per bag
- Find total cost of chocolate chips

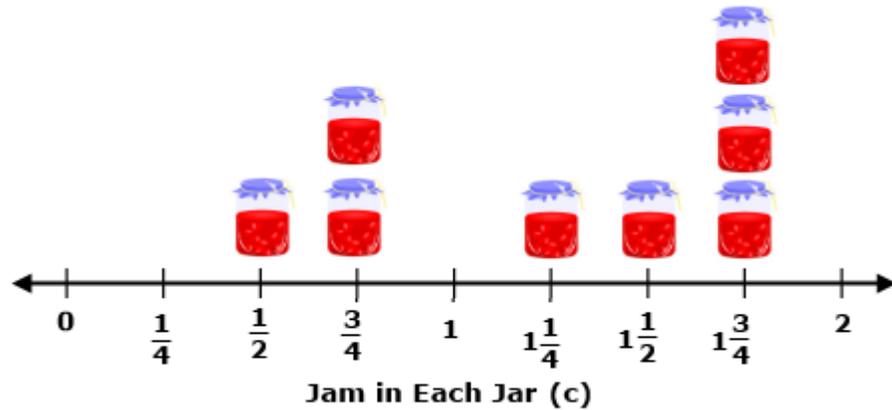
Are your steps correct? If not, determine which steps you should follow and the correct total cost of chocolate chips.

The steps are not correct. You should find the total number of bags, multiply that by the total cost per bag, and then use that number as the total cost of chocolate chips. Using this method, I found that the total cost of chocolate chips should be \$57.07.

5. You were taking note of the dimensions of all the cake pans your aunt has for the bakery. You found that one cake pan had a length of 11 inches, a width of 7 inches, and a height of 2 inches. Your aunt wanted you to find the volume of a cake pan with the width doubled. What would happen to the volume of the cake pan if the width was doubled? Explain your reasoning.

If my aunt found a cake pan with a width that is doubled, the volume would be twice the original volume. I know this because the volume of the original cake pan would be 154 inches cubed. If I doubled the width, the new volume would be 308 inches cubed, which is two times the original volume.

6. Your final task in helping your aunt prepare for her bakery opening was to measure the jam your aunt made and put it into jars. You measured the about of jam, in cups, in 8 jars.



You needed to combine all of the jam and then divide it equally into the 8 jars. How much jam, in cups, would each jar have? Explain the steps you took to solve this.

After combining the jam and dividing it equally, I found that each jar would have $1\frac{1}{4}$ cup of jam in it. I found this by adding all of the jam shown to equal $\frac{40}{4}$, or 10, cups and dividing that by the 8 jars to get $1\frac{1}{4}$.

End of Performance Task

Scoring Rubrics:

Scoring Rubric Question 1:	
1 Point:	The student demonstrates good understanding plotting points within the first quadrant of the coordinate grid. The student correctly plots the location of the new bakery.
0 Points:	The student demonstrates no understanding plotting points within the first quadrant of the coordinate grid. The student does not correctly plot the location of the new bakery.

Scoring Rubric Question 2:	
1 Point:	The student demonstrates good understanding of using the dividing with fractions and whole numbers. The student correctly calculates the number of batches that could be made with 54 cups of flour.
0 Points:	The student demonstrates no understanding of using the four operations with decimals. The student does not correctly calculate the number of batches that could be made with 54 cups of flour.

Scoring Rubric Question 3:	
3 Points:	The student demonstrates thorough understanding of dividing multi digit numbers and interpreting remainders. The student correctly calculated the number of bags that needed to be purchased and correctly explained their reasoning.
2 Points:	The student demonstrates partial understanding of dividing multi digit numbers and interpreting remainders. The student did everything else correctly, but did not explain their reasoning. OR The student did everything else correctly, but misinterpreted the remainder of the division problem.
1 Point:	The student demonstrates limited understanding of dividing multi digit numbers and interpreting remainders. The student miscalculated the number of bags but correctly explained their reasoning.
0 Points:	The student demonstrates no understanding of dividing multi digit numbers and interpreting remainders. The student made a mistake in their calculation and explanation.

Scoring Rubric Question 4*:	
3 Points:	The student demonstrates thorough understanding of using the four operations with decimals and evaluating reasoning and identifying errors. The student correctly noted that the steps were not correct, explained their reasoning, and correctly noted the total cost of chocolate chips.
2 Points:	The student demonstrates partial understanding of using the four operations with decimals and evaluating reasoning and identifying errors. The student correctly noted that the steps were not correct, explained their reasoning, but did not correctly note the total cost of the chocolate chips. OR The student correctly noted that the steps were not correct, correctly note the total cost of the chocolate chips, but did not explain their reasoning.
1 Point:	The student demonstrates limited understanding of using the four operations with decimals and evaluating reasoning and identifying errors. The student noted that the steps were not correct but did not correctly explain their reasoning or find the total cost of the chocolate chips. OR The student correctly found the total cost of the chocolate chips but did not note that the steps were incorrect and did not explain their reasoning.
0 Points:	The student demonstrates no understanding of using the four operations with decimals and evaluating reasoning and identifying errors. The student made a mistake in their calculation and explanation.

**A student should receive full credit for this question if they correctly calculate with the incorrect numbers from the previous question(s).*

Scoring Rubric Question 5:	
3 Points:	The student demonstrates a thorough understanding of finding the volume of rectangular prisms. The student correctly determined that the volume of the new cake pan would be twice the volume of the original pan, correctly determined the volumes, and correctly explained their reasoning.
2 Points:	The student demonstrates a good understanding of finding the volume of rectangular prisms. The student correctly determined that the volume of the new cake pan would be twice the volume of the original pan and correctly determined the volumes, but did not explain their reasoning. OR The student correctly determined that the volume of the new cake pan would be twice the volume of the original pan and explained their reasoning but did not correctly determine the volumes of the two pans.
1 Point:	The student demonstrates some understanding of finding the volume of rectangular prisms. The student determined that the volume would be twice the size but did not explain their reasoning or state the two volumes.
0 Points:	The student demonstrates little to no understanding of finding the volume of rectangular prisms. The student does not determine that the volume would be doubled, does not explain their reasoning, and does not state the volumes correctly.

Scoring Rubric Question 6:	
2 Points:	The student demonstrates a thorough understanding of interpreting line plots and adding fractions. The student correctly calculates that $1\frac{1}{4}$ cup of jam will be in each jar and correctly explains the steps they took to solve this.
1 Point:	The student demonstrates a good understanding of interpreting line plots and adding fractions. The student correctly calculates that $1\frac{1}{4}$ cup of jam will be in each jar but does not correctly explain the steps they took to solve this.
0 Points:	The student demonstrates little to no understanding of interpreting line plots and adding fractions. The student does not correctly calculate the cups in each jar and does not correctly explain the steps they took to get that answer.