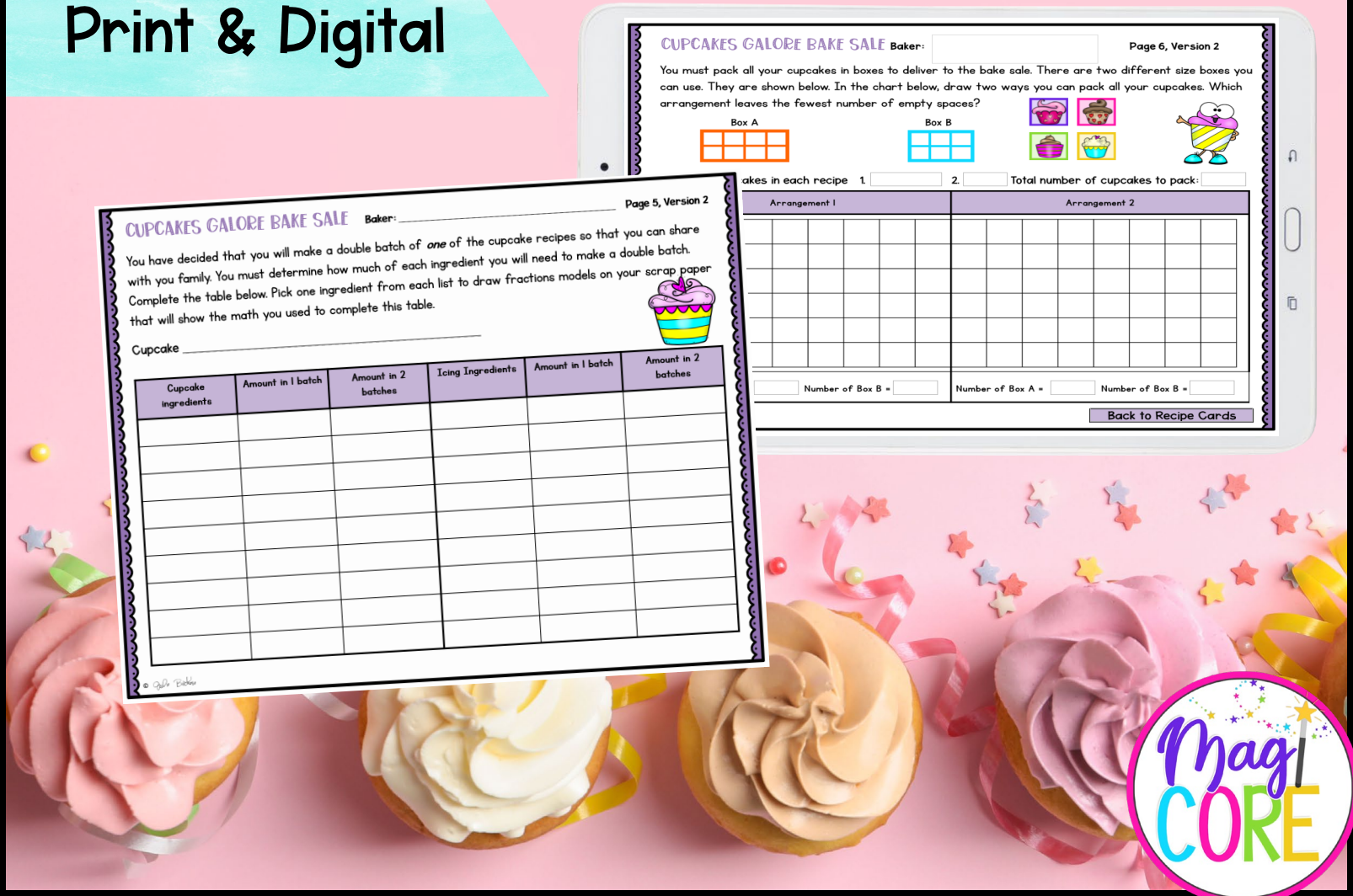
Cupcakes Galore

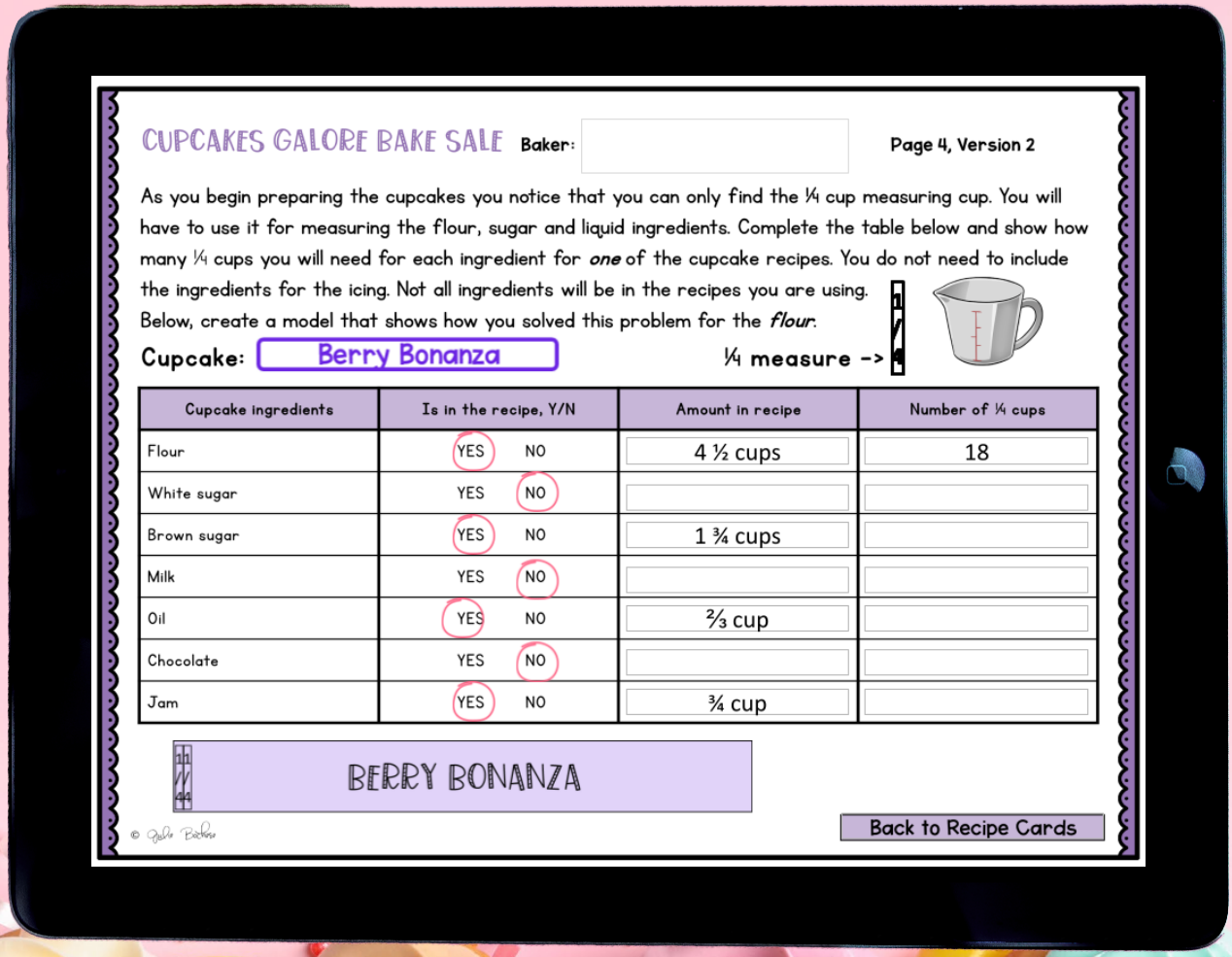
Project Based Learning

4th Grade Math
Print & Digital



Print & Digital Versions

Interactive Movable Pieces



CUPCAKES GALORE BAKE SALE Baker: Page 4, Version 2

As you begin preparing the cupcakes you notice that you can only find the ¼ cup measuring cup. You will have to use it for measuring the flour, sugar and liquid ingredients. Complete the table below and show how many ¼ cups you will need for each ingredient for *one* of the cupcake recipes. You do not need to include the ingredients for the icing. Not all ingredients will be in the recipes you are using. Below, create a model that shows how you solved this problem for the *flour*.

Cupcake: Berry Bonanza

¼ measure -> 1/4

Cupcake ingredients	Is in the recipe, Y/N	Amount in recipe	Number of ¼ cups
Flour	YES NO	4 ½ cups	18
White sugar	YES NO		
Brown sugar	YES NO	1 ¾ cups	
Milk	YES NO		
Oil	YES NO	⅔ cup	
Chocolate	YES NO		
Jam	YES NO	¾ cup	

11/44 BERRY BONANZA

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Realistic Recipes

CUPCAKES GALORE-RECIPE CARDS

Version 2

Chocolate Walnut Delight

Cupcake Ingredients

- 2 1/3 cups of flour
- 1 ¼ teaspoons of baking powder
- 1 ¼ teaspoons of baking soda
- 1 ¼ cups of white sugar
- 9 tablespoons of butter
- 1 ½ teaspoons of vanilla
- 1 egg
- 2/3 cup of cooking oil
- 1 ¾ cups of chocolate chips, melted

Double Chocolate Icing Ingredients

- 1 ½ cup of confectioners' sugar
- ¾ cup of chopped walnuts
- 5/8 cup of chocolate chips, melted
- 2/3 cup of milk

Bake at 350°F for 28 minutes.
Makes 2 ½ dozen cupcakes.

Cinnamon Sensation

Cupcake Ingredients

- 3 2/3 cups of flour
- 1 teaspoons of baking powder
- 1 ½ teaspoons of baking soda
- 1 ½ tablespoons of cinnamon
- 1 cup of white sugar, plus one tablespoon
- 6 tablespoons of butter
- 2 ¼ teaspoons of vanilla
- 3 egg whites
- 1 egg yolk

Cinnamon Butter Icing Ingredients

- 2 1/3 cups of confectioners' sugar
- 6 ½ tablespoons of butter
- 1 ¾ teaspoons of cinnamon
- 2/3 cup of milk

Bake at 325 °F for 24 minutes.
Makes 3 dozen cupcakes.

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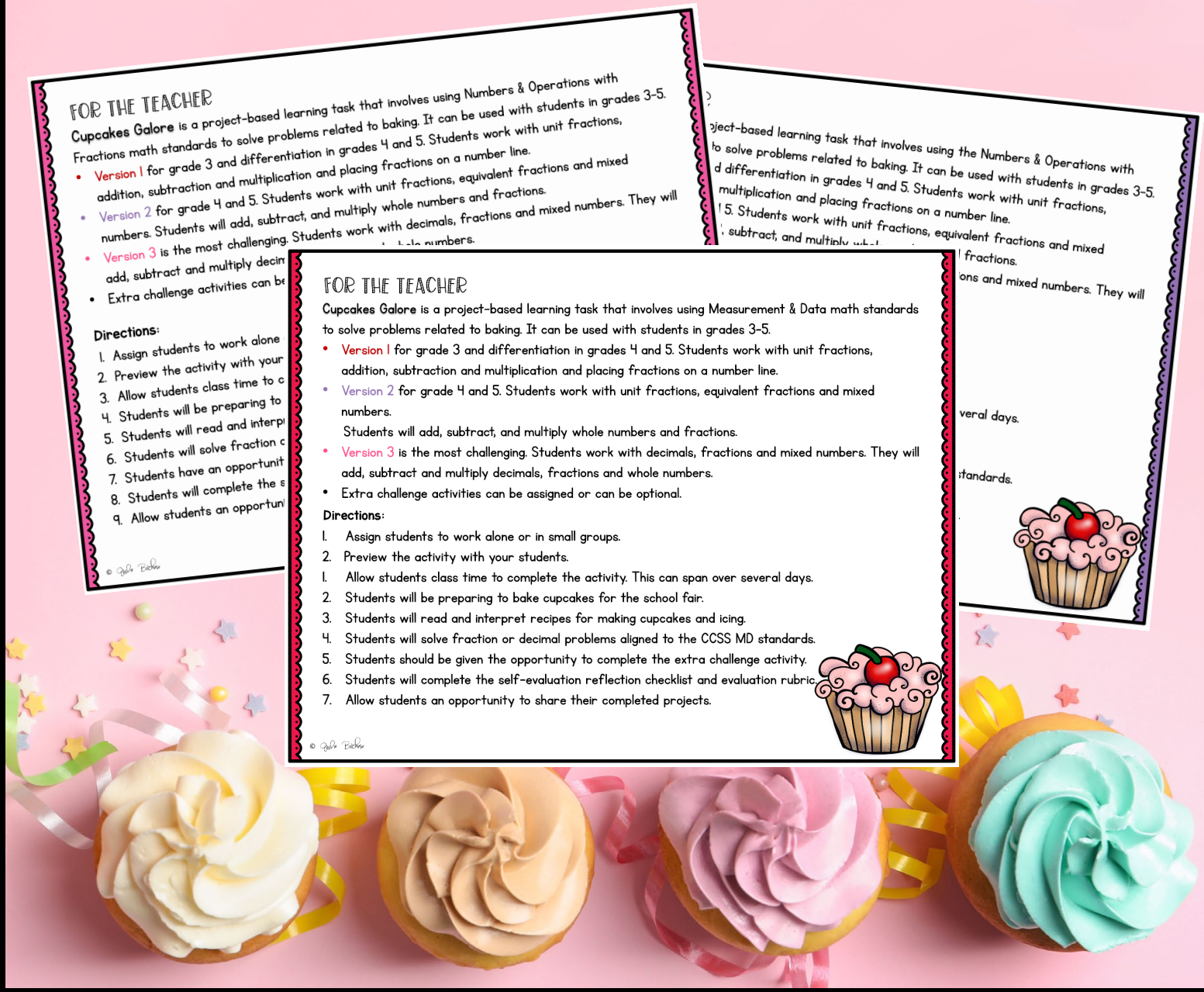
3 Levels of Difficulty Available



FOR THE TEACHER

Cupcakes Galore is a project-based learning task that involves using Numbers & Operations with Fractions math standards to solve problems related to baking. It can be used with students in grades 3-5.

- Version 1 for grade 3 and differentiation in grades 4 and 5. Students work with unit fractions, addition, subtraction and multiplication and placing fractions on a number line.
- Version 2 for grade 4 and 5. Students work with unit fractions, equivalent fractions and mixed numbers. Students will add, subtract, and multiply whole numbers and fractions.
- Version 3 is the most challenging. Students work with decimals, fractions and mixed numbers. They will add, subtract and multiply decim
- Extra challenge activities can be

Directions:

1. Assign students to work alone
2. Preview the activity with your
3. Allow students class time to c
4. Students will be preparing to
5. Students will read and interp
6. Students will solve fraction c
7. Students have an opportunit
8. Students will complete the s
9. Allow students an opportun

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FOR THE TEACHER

Cupcakes Galore is a project-based learning task that involves using Measurement & Data math standards to solve problems related to baking. It can be used with students in grades 3-5.

- Version 1 for grade 3 and differentiation in grades 4 and 5. Students work with unit fractions, addition, subtraction and multiplication and placing fractions on a number line.
- Version 2 for grade 4 and 5. Students work with unit fractions, equivalent fractions and mixed numbers.
  Students will add, subtract, and multiply whole numbers and fractions.
- Version 3 is the most challenging. Students work with decimals, fractions and mixed numbers. They will add, subtract and multiply decimals, fractions and whole numbers.
- Extra challenge activities can be assigned or can be optional.

Directions:

1. Assign students to work alone or in small groups.
2. Preview the activity with your students.
1. Allow students class time to complete the activity. This can span over several days.
2. Students will be preparing to bake cupcakes for the school fair.
3. Students will read and interpret recipes for making cupcakes and icing.
4. Students will solve fraction or decimal problems aligned to the CCSS MD standards.
5. Students should be given the opportunity to complete the extra challenge activity.
6. Students will complete the self-evaluation reflection checklist and evaluation rubric.
7. Allow students an opportunity to share their completed projects.

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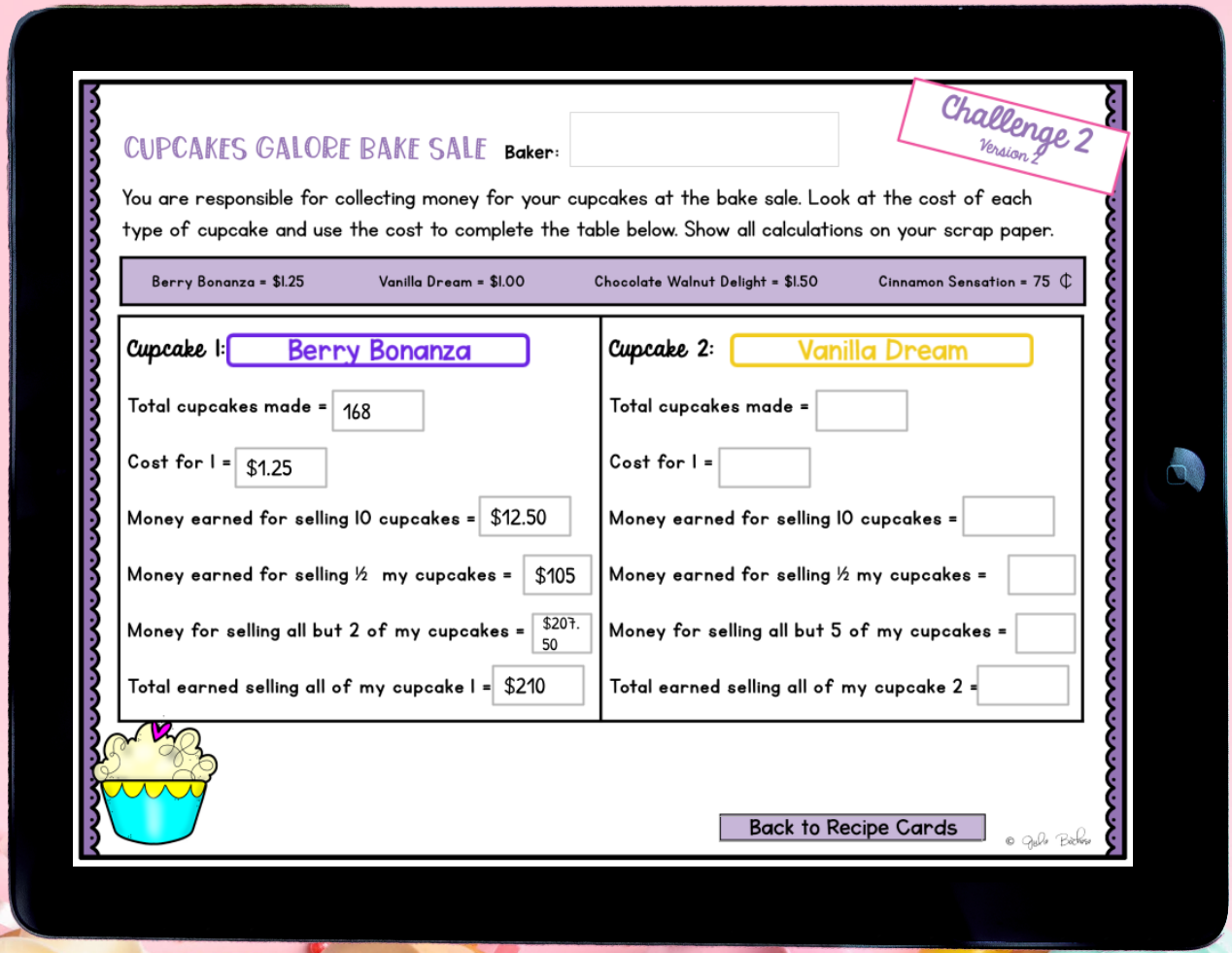
Challenge Activities



CUPCAKES GALORE BAKE SALE

Baker:

Challenge 2
Version 2

You are responsible for collecting money for your cupcakes at the bake sale. Look at the cost of each type of cupcake and use the cost to complete the table below. Show all calculations on your scrap paper.

Berry Bonanza = $1.25	Vanilla Dream = $1.00	Chocolate Walnut Delight = $1.50	Cinnamon Sensation = 75 ¢

Cupcake 1: Berry Bonanza		Cupcake 2: Vanilla Dream	
Total cupcakes made =	168	Total cupcakes made =	
Cost for 1 =	$1.25	Cost for 1 =	
Money earned for selling 10 cupcakes =	$12.50	Money earned for selling 10 cupcakes =	
Money earned for selling ½ my cupcakes =	$105	Money earned for selling ½ my cupcakes =	
Money for selling all but 2 of my cupcakes =	$207.50	Money for selling all but 5 of my cupcakes =	
Total earned selling all of my cupcake 1 =	$210	Total earned selling all of my cupcake 2 =	

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Applicable to Real Life & Fun!

CUPCAKES GALORE BAKE SALE

Baker:

Page 9, Version 2

You decide to make your cupcakes on Saturday. Use the recipe card and the list to the right to help you answer the questions below. Cupcake names and preparation times can be dragged below.

Cupcake	Minutes to prepare recipe
Berry Bonanza	35 minutes
Vanilla Dream	42 minutes
Chocolate Walnut Delight	50 minutes
Cinnamon Sensation	38 minutes

My two recipes: 1. Berry Bonanza 2. Vanilla Dream

1. Determine the amount of time it will take to prepare and bake both of your cupcake recipes.

Cupcake 1: 35 Cupcake 2: 42

2. If you begin making cupcake 1 at 9:00 am, what time will it be when the cupcakes come out of the oven?

9:35

3. You begin cupcake 2 after lunch at 12:30 pm. What time will you take the second cupcakes out of the oven?

1:12

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