CAKE TERMS

Presented by Kaia, Julia and Alex

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In this project, we worked together to make a magnificent cake. But not just any cake, an iPad cake.

To use polynomials in this project, we used the quantity of each and every ingredient used in our solution.

For example, if there was 5 cups of sugar total used in our solution, the term would be 5s.

The Cake: Step 1: Make The Cake

We found a easy/simple recipe to use so it made making the cake much easier.

INGREDIENTS

(recipe follows)

2 cups	sugar
1-3/4 cups	all-purpose flour
3/4 cup	HERSHEY'S Cocoa
1-1/2 teaspoons	baking powder
1-1/2 teaspoons	baking soda
1 teaspoon	salt
2	eggs
1 cup	milk
1/2 cup	vegetable oil
2 teaspoons	vanilla extract
1 cup	boiling water

DIRECTIONS

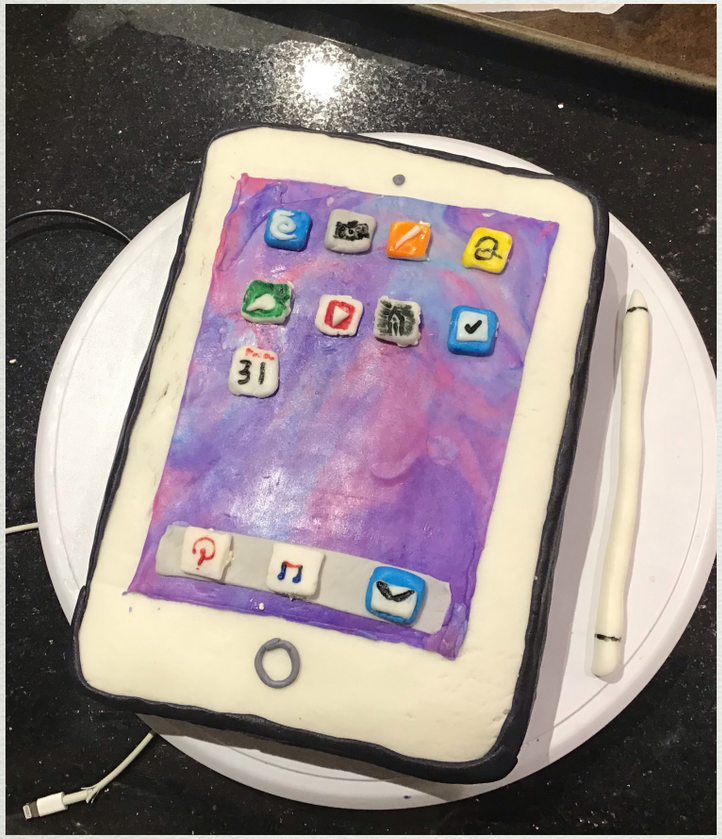
1. Heat oven to 350°F. Grease and flour two 9-inch round baking pans.

2. Stir together sugar, flour, cocoa, baking powder, baking soda and salt in large bowl. Add eggs, milk, oil and vanilla; beat on medium speed of mixer 2 minutes. Stir in boiling water (batter will be thin). Pour batter into prepared pans.

3. Bake 30 to 35 minutes or until wooden pick inserted in center comes out clean. Cool 10 minutes; remove from pans to wire racks. Cool completely. Frost with "PERFECTLY CHOCOLATE" CHOCOLATE FROSTING. Makes 12 servings.

The Cake: Step 2: Decorate The Cake

- After we were done making the iPad, we had lots of fondant left so we decided to make a Apple Pencil to go with it.



Our terms/polynomials

Cake:

$2s + f + 0.75c + 2.08bp + 2.08bs + 2.08s + 2e + m + 0.5v + 4.16va + w$

Icing:

$0.5s + 1.5b + 3e$

Fondant:

$7s+9.1ma+2.5f+0.125w+0.6ve$

Variable legend:

Sugar=s
Flour=f
Cocoa powder=c
Baking powder=bp
Baking soda=bs
Salt=sa
Marshmallows=ma

Eggs=e
Milk=m
Vegetable oil=v
Water=w
Vanilla Extract=va
Butter=b
Fondant=fo
Vegetable short=ve

Our terms/polynomials (total)

Original: 2s + 1.75f + 0.75c + 2.08bp + 2.08bs + 2.08s + 2e + m + 0.5v + 4.16va + w + 4s + 9.1ma + 2.5fo + 0.125w + 0.6ve+0.5s+1.5b+3e

Like Terms: 9.1ma + 8.6s + 5e + 4.16va + 2.5fo + 2.08bs + 2.08bp + 1.5b + 1.125w + f + m + 0.75c + 0.6ve + 0.5v

Total cups used of everything:

39.995 cups (40cups)

Conclusion

- Our driving question that we chose for this project is “How can polynomials represent the quantity of each ingredient in a cake?”
- In this project we’ve learned that fondant is expensive and that it is possible to use like terms to simplify the quantity of ingredients you need for a cake. Even though we did use the like terms to put all of our ingredients together, it didn’t make much of a difference because of the different variety of ingredients that we used.
- So, to answer our driving question, it is indeed possible to use polynomials to represent the quantity of each ingredient in a cake. We decided to use the amount of cups used in each term and for things like eggs, we counted one egg as a cup.
- We tried to minimize the amount of ingredients by using simpler recipes that we used but it still ended up having lots of terms.

THANKS FOR LISTENING!

LET'S EAT FOLKS!