

MATH EXTENSION—PROBLEM OF THE WEEK
.....**Investigation 4: Fizz Quiz**

My cousin was interested in reactions that produce carbon dioxide gas. She wondered if there was some way to predict how much gas a reaction would produce. She did a series of seven experiments and measured the amount of carbon dioxide released by each one.

Baking soda (spoons)	Calcium chloride (spoons)	Carbon dioxide (milliliters)
1	1	800
1	2	1600
1	3	1600
2	1	800
2	2	1600
2	3	2400
3	1	800

Based on my cousin's experimental results, answer these questions.

1. How many mL of gas would be produced if 3 spoons of baking soda reacted with 3 spoons of calcium chloride?

2. How many mL of gas would be produced if 2 spoons of baking soda reacted with 1.5 spoons of calcium chloride?

3. My cousin wanted to produce exactly 2000 mL of carbon dioxide. How much baking soda and calcium chloride should she use?