Pizza!

Fairview Elementary Math Club

Pizza toppings

Oren, Ada, and Milo each have a different favorite pizza topping among Olive, Anchovy, and Mushroom. Nobody's favorite topping starts with the same letter as their own name. Ada doesn't like Olives. What's each person's favorite?

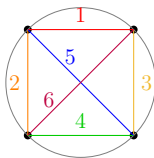|	Olive	Anchovy	Mushroom
Oren			
Ada			
Milo			

Pizza toppings

Alvin, Simon, Theodore, and Nova each have a different favorite pizza topping among Artichoke, Spinach, Turkey, and Nori. Nobody's favorite topping starts with the same letter as their own name. Alvin and Simon do not like eating animals. Simon also does not like artichoke. What's each person's favorite?

	Artichoke	Spinach	Turkey	Nori
Alvin				
Simon				
Theodore				
Nova				

Pizza cuts

Take a pizza, and draw some dots on the edge of the crust.
How many cuts will you make if you use a pizza wheel to
make a straight cut between every pair of dots? Keep
repeating for different numbers of dots, to fill out the table
below.

Example (4 dots $\implies$ 6 cuts):

Dots	0	1	2	3	4	5	6	7	8	9
Cuts					6					

After you fill in the table, what patterns do you see?

Pizza productivity

In 3 minutes, 3 pizza-makers together make 3 pizzas.

- ▶ How many pizzas can 6 pizza-makers make in 6 minutes? (...are you sure?)
- ▶ How many pizza-makers are needed to make 9 pizzas in 9 minutes?

Pizza productivity

Now, in 2 minutes, 2 pizza-makers together make 2 pizzas.

- ▶ How many pizzas can 6 of these pizza-makers make in 6 minutes?
- ▶ How many minutes does it take 4 pizza-makers to make 4 pizzas?

Pizza combos

Consider making a "two-topping" pizza: crust, sauce, cheese, and two different toppings. If we only have olives and pepperoni available, then we can only make one type of pizza: olive and pepperoni. If we also have mushroom, then we can make three different types: olive-pepperoni, olive-mushroom, and pepperoni-mushroom.

If we had a fourth ingredient, then how many options are there? What if we had a fifth ingredient? See if you can find all the combos, and write down what you find in the table.

# ingredients	0	1	2	3	4	5	6	7	8	9
# two-topping pizzas			3							

After you fill in the table, what patterns do you see?