Arithmetic

Learning goals: Students will be able to

1. Make up their own divisibility rules for numbers 2-10
2. Explain why the divisibility rules work

Directions

1. Look at the simulation arithmetic

Discover:

1. You are planning a pizza party and want to order enough pizzas to satisfy all your friends. Each friend only gets one slice of pizza (they are big slices). You want to have exactly the right amount because you do not want to spend extra money. A large pizza is sliced in 8 slices, a medium in 6 slices, a small in 3 slices, and a personal pizza in 2 slices. How many pizzas will you need for a group of:
2. 10 people
3. 15 people
4. 24 people
5. Start the arithmetic simulation. Investigate the products, the answers to the multiplication of numbers, using only the numbers 2-10.

|  |  |  |
| --- | --- | --- |
| Number | Products | conclusions |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |

1. Write a rule to be able to test any number to see if it is a product of one of the above number.

|  |  |
| --- | --- |
| Number | Rule |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |

1. Discuss with a group your rules and make any adjustments or corrections you may need.
2. Check your corrections to see if they hold true with the products of the numbers 2-10.
3. If a friend from a different class asked for help, what would you tell him/her.
4. Check to see if your rule works for larger numbers:

|  |  |  |
| --- | --- | --- |
| Number | Which numbers work | How do you know |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. Make a poster, pamphlet, song, or whatever you want to display your rules.

Closure:

Discuss divisibility rules with the class and why they are important.