



## Preliminary Planning Sheet Grade 3 – Waffles

### Domain(s)

Number and Operations—  
Fractions<sup>1</sup>

### Standard(s)

3.NF.A.1

### Mathematical Practices

MP.1 MP.3 MP.4 MP.5 MP.6

### Major Underlying Mathematical Concepts

- Fractional parts of a whole  $1/b$  as the quantity formed by 1 part when a whole is partitioned into  $b$  parts
- Addition/Multiplication
- Properties of a square
- Number sense to 18

### Problem Solving Strategies

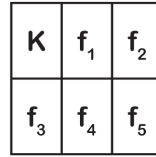
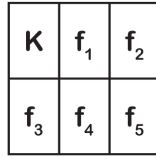
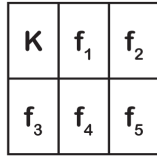
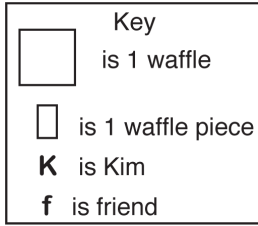
- Model (manipulatives)
- Diagram/Key (area model)
- Table
- Number line

### Formal Mathematical Language and Symbolic Notation

- Model
- Diagram/Key
- Area model
- Table
- $1/6$ ,  $2/6$ ,  $3/6$  ...
- Whole
- Numerator/Denominator
- Fraction
- Greater than ( $>$ )/Less than ( $<$ )
- Equivalent/Equal to
- 100%
- Per
- Equal share
- Square
- Shape
- $1/2$
- $1/3$

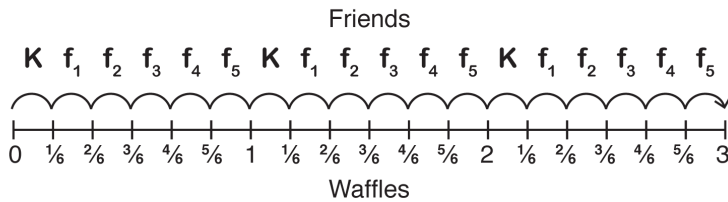
## Possible Solution(s)

See diagram. Each square waffle should be cut into sixths.



$$1 + 5 = 6 \text{ people}$$

Waffle Pieces	Waffle 1			Waffle 2			Waffle 3		
	Friend	Waffle Piece	Total Pieces	Friend	Waffle Piece	Total Pieces	Friend	Waffle Piece	Total Pieces
<b>f<sub>1</sub></b> – 3	1 (Kim)	$\frac{1}{6}$	$\frac{1}{6}$	1 (Kim)	$\frac{1}{6}$	$\frac{1}{6}$	1 (Kim)	$\frac{1}{6}$	$\frac{1}{6}$
<b>f<sub>2</sub></b> – 3	2	$\frac{1}{6}$	$\frac{2}{6}$	2	$\frac{1}{6}$	$\frac{2}{6}$	2	$\frac{1}{6}$	$\frac{2}{6}$
<b>f<sub>3</sub></b> – 3	3	$\frac{1}{6}$	$\frac{3}{6}$	3	$\frac{1}{6}$	$\frac{3}{6}$	3	$\frac{1}{6}$	$\frac{3}{6}$
<b>f<sub>4</sub></b> – 3	4	$\frac{1}{6}$	$\frac{4}{6}$	4	$\frac{1}{6}$	$\frac{4}{6}$	4	$\frac{1}{6}$	$\frac{4}{6}$
<b>f<sub>5</sub></b> – 3	5	$\frac{1}{6}$	$\frac{5}{6}$	5	$\frac{1}{6}$	$\frac{5}{6}$	5	$\frac{1}{6}$	$\frac{5}{6}$
<b>f<sub>5</sub></b> – 3	6	$\frac{1}{6}$	$\frac{6}{6}$	6	$\frac{1}{6}$	$\frac{6}{6}$	6	$\frac{1}{6}$	$\frac{6}{6}$



## Possible Connections

Below are some examples of mathematical connections. Your students may discover some that are not on this list.

- Each friend gets 3 pieces of waffle to eat.
- Each friend could also eat  $\frac{1}{2}$  of 1 waffle, which is the same as eating  $\frac{1}{6}$  of each of 3 waffles.
- $\frac{3}{6}$  is  $\frac{1}{2}$  of a waffle per friend.
- Relate to a similar task and state a math link.
- Solve more than one way to verify the answer.
- If you change the waffle shape to a circle or rectangle, you can still cut each waffle into sixths.
- There will be no leftover pieces of waffle.