## ir Illustrative Mathematics

## Grade 4 Unit 9

Lesson 2
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## Unit 9 Lesson 2: Sums and Differences of Fractions

## WU Number Talk: Wholes and Units (Warm up)

## Student Task Statement

Find the value of each expression mentally.

- $38+62$
- $38 \frac{2}{6}+62 \frac{3}{6}$
- $38 \frac{2}{6}+62 \frac{3}{6}+17 \frac{1}{6}$
- $138 \frac{2}{6}+162 \frac{3}{6}+17 \frac{2}{6}$


## 1 Straws for A Roller Coaster

## Student Task Statement

In science class, Noah, Tyler, and Jada are building a model of a roller coaster out of 1-foot-long paper straws.

- Noah needs a piece that is $\frac{7}{12}$ foot long.
- Tyler needs one that is $\frac{1}{4}$ foot long.
- Jada needs one that is shorter than the other two.

Jada says, "We can just use one straw for all these pieces."


1. Draw a diagram to represent this situation and explain to your partner how it matches the situation. Then, find the length of the piece of straw that could be Jada's piece.
2. Did Noah use more than $\frac{1}{2}$ foot or less than $\frac{1}{2}$ foot of straw? Explain or show your reasoning.
3. Tyler says, "If Jada uses a piece that is $\frac{1}{6}$ foot long, there would be a piece of straw that is $\frac{1}{12}$ foot left."

Do you agree or disagree with Tyler? Explain your reasoning.

## 2 Tall Enough for a Ride?

## Student Task Statement

Lin's class is on a trip to the amusement park. Visitors must be at least a certain height to get on rides. Use the table to answer questions about four students' height.

| ride | height requirement |
| :---: | :---: |
| tilt and spin | 52 inches |
| roller coaster | 54 inches |
| bumper cars | 44 inches |

1. Andre is $3 \frac{3}{8}$ inches shorter than the height requirement for the roller coaster. How tall is Andre?
2. Lin is $\frac{18}{8}$ inches taller than Andre. How tall is Lin?
3. Elena was $1 \frac{3}{4}$ inches too short to ride the bumper cars last year. Since then she grew $4 \frac{1}{2}$ inches. How tall was Elena last year? How tall is she now?
4. Mai is tall enough to ride all the rides this year. Mai was $51 \frac{7}{8}$ inches tall last year. At least how many inches did Mai grow?
