Unit 2 Lesson 14: Fraction Comparison Problems

WU Number Talk: Multiples of Ten (Warm up)

Student Task Statement

Find the value of each expression mentally.

- $119 + 119$
- $139 + 139$
- $159 + 159$
- $199 + 199$

1 Mystery Fractions

Student Task Statement

Six friends are each given a list of 5 fractions. They each chose one fraction quietly and wrote clues about their choice. Use their clues to identify the fractions they chose.

Andre: $\frac{8}{12}$ $\frac{3}{6}$ $\frac{3}{4}$ $\frac{3}{2}$ $\frac{2}{12}$

- less than 1
- greater than $\frac{1}{3}$
- less than $\frac{2}{3}$

Tyler: $\frac{2}{6}$ $\frac{2}{2}$ $\frac{2}{4}$ $\frac{2}{3}$ $\frac{2}{5}$

- greater than $\frac{1}{3}$
- less than 1
- less than $\frac{1}{2}$

Clare: $\frac{4}{3}$ $\frac{4}{2}$ $\frac{3}{4}$ $\frac{1}{4}$ $\frac{2}{10}$

- greater than $\frac{2}{8}$
- less than $\frac{11}{6}$
- greater than 1

Diego: $\frac{2}{8}$ $\frac{6}{12}$ $\frac{6}{8}$ $\frac{12}{10}$ $\frac{11}{12}$

- greater than $\frac{1}{2}$
- less than 1
- greater than $\frac{3}{4}$

Elena: $\frac{2}{12}$ $\frac{50}{100}$ $\frac{4}{10}$ $\frac{3}{5}$ $\frac{7}{5}$
• greater than $\frac{2}{10}$
• less than 1
• greater than $\frac{3}{6}$

Noah: $\frac{18}{10}$ $\frac{7}{8}$ $\frac{2}{5}$ $\frac{18}{5}$ $\frac{150}{100}$
• greater than $\frac{1}{2}$
• less than $\frac{25}{10}$
• greater than $\frac{8}{5}$

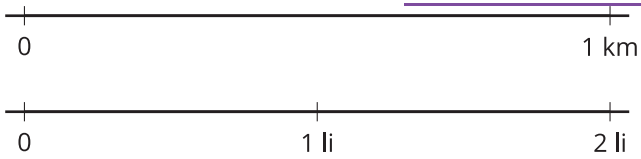## 2 Distances on Foot

Student Task Statement

In China and some East Asian countries, the unit "li" is used for measuring distance.

Here are the walking distances between the home of a student in China and the places he visits regularly.

- school: $\frac{7}{5}$ li
- library: $\frac{23}{10}$ li

- market: $\frac{7}{4}$ li
- badminton club: $\frac{23}{12}$ li

1. Which is a shorter distance from the student's home:

   a. His school or the library?

   b. The market or the badminton club?

   c. The library or the market?

2. A student in America walks $\frac{4}{5}$ kilometer (km) to school. These number lines show how 1 kilometer compares to 1 li.

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+————————————————————————————+————————————————
0                            1 km
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+———————————————+———————————————+————————
0               1 li            2 li
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Which student walks a longer distance to school? Use the number lines to show your reasoning.

3. Explain why we can't just compare the fractions $\frac{4}{5}$ and $\frac{7}{5}$ to see which student walks a longer distance.