## Lesson 14: Fraction Comparison Problems

* Let’s solve different kinds of fraction comparison problems.

### Warm-up: Number Talk: Multiples of Ten

Find the value of each expression mentally.

* $119+119$
* $139+139$
* $159+159$
* $199+199$

### 14.1: Mystery Fractions

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.

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| 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 $\frac{2}{3}$
 |

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| 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 $\frac{1}{2}$
 |

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| 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
 |

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| 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 $\frac{3}{4}$
 |

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| 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 $\frac{3}{6}$
 |

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| 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 $\frac{8}{5}$
 |

### 14.2: Distances on Foot

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:
	1. His school or the library?
	2. The market or the badminton club?
	3. 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.
* 
* Which student walks a longer distance to school? Use the number lines to show your reasoning.
1. Explain why we can’t just compare the fractions $\frac{4}{5}$ and $\frac{7}{5}$ to see which student walks a longer distance.



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