Assessment : Section C Checkpoint

Problem 1

> Goals Assessed
>
> • Use visual representations or a numerical process to reason about fraction comparison.

Statement

Use a <, =, or > symbol to make each statement true. Explain your reasoning.

1. $\frac{4}{12}$ _____ $\frac{1}{3}$

2. $\frac{53}{100}$ _____ $\frac{5}{12}$

3. $\frac{265}{100}$ _____ $\frac{28}{10}$

4. $\frac{13}{8}$ _____ $\frac{7}{5}$

Solution

1. $\frac{4}{12} = \frac{1}{3}$, because $\frac{1}{3}$ is the same as $\frac{1\times4}{3\times4}$, which is $\frac{4}{12}$.

2. $\frac{53}{100} > \frac{5}{12}$, because $\frac{53}{100}$ is more than $\frac{1}{2}$ and $\frac{5}{12}$ is less than $\frac{1}{2}$.

3. $\frac{265}{100} < \frac{28}{10}$, because $\frac{28}{10}$ is $\frac{280}{100}$.

4. $\frac{13}{8} > \frac{7}{5}$, because if I take away 1 from each then I have $\frac{5}{8}$ and $\frac{2}{5}$. I know $\frac{5}{8}$ is more than $\frac{1}{2}$, and $\frac{2}{5}$ is less than $\frac{1}{2}$.

Problem 2

> Goals Assessed
>
> • Use visual representations or a numerical process to reason about fraction comparison.

Statement

Clare walked $\frac{4}{5}$ of the way around a lake. Tyler walked $\frac{7}{12}$ of the way around a different lake. Explain why you don't have enough information to determine who walked farther.

Solution

I know that $\frac{4}{5}$ is greater than $\frac{7}{12}$ because $\frac{4}{5}$ is close to 1 (or is $\frac{1}{5}$ less than 1) and $\frac{7}{12}$ is just a little over $\frac{1}{2}$ (or is $\frac{1}{12}$ more than $\frac{6}{12}$, which is $\frac{1}{2}$). But I don't know how far it is all the way around each lake. If the lake Tyler is walking around has a much longer distance than the lake Clare is walking around, then Tyler could be walking farther.