

# Informal Ordering Strategies

Order these fractions from smallest to largest. Be prepared to explain your thinking.

$$\frac{3}{4} \quad \frac{1}{10} \quad \frac{14}{15} \quad \frac{3}{5} \quad \frac{5}{12}$$

# Misunderstandings

Which is bigger,  $\frac{3}{4}$  or  $\frac{14}{15}$ ?

## NEEDS SOME WORK

1. They are equal as both are one away from the whole.
2.  $\frac{3}{4}$  is larger because the denominator is a lower number so it is going to have bigger pieces.

# Misunderstandings

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## VALID REASONING

Fourths are bigger than fifteenths.  $\frac{14}{15}$  is bigger because it has smaller pieces so there is going to be a small amount left and it's going to be a bigger piece left for  $\frac{3}{4}$ .

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Even Trickier...Correct Answer but look at the reasoning....

What do you think of this students' reasoning?

*$\frac{6}{8}$  is greater than  $\frac{4}{11}$  because with  $\frac{6}{8}$  you need 2 to get to the whole and with  $\frac{4}{11}$  you need 7.*

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**Provide a counterexample :  $\frac{9}{10}$  and  $\frac{98}{100}$**