LESSON MAKER PRO

Same Whole?

Check the whole before comparing fractions.

GRADE 4 · 4.NF.A.14.a

4.NF.A.14.a "Explain that comparison of two fractions is valid only when the two fractions refer to the same whole."

NAME _____ DATE _____

THE BIG IDEA

You can compare fractions to decide which part is greater only when the wholes are the same size. If the wholes differ, find the size of each part before comparing them.

WORKED EXAMPLE

These strips are the same size. Which shaded part is greater?

7/9



8/9



1. The strips are the same size.
2. Each strip has 9 equal parts.
3. 8 shaded parts is more than 7.

Answer: 8/9 > 7/9

PRACTICE 4 problems

1 Two same-size pizzas have 1/4 and 3/4 left. Write <, >, or = between 1/4 and 3/4.

ANSWER _____

2 Sam eats 1/2 of a small cake. Lee eats 1/4 of a large cake. Can you tell who ate more from the fractions alone? Explain.

ANSWER _____

3 Maya colors 2/6 of a paper strip. Leo colors 4/6 of an equal-size strip. Who colors more?

ANSWER _____

4 One bottle holds 10 cups. Another holds 20 cups. Compare 1/2 of the first bottle with 1/4 of the second: more, less, or equal?

ANSWER _____

APPLY IT Show your work

1 At the skate park, Ava drinks 1/2 of her jug. Ben drinks 1/4 of his. Who drinks more? Explain why the fractions alone do not settle it.

WATER JUGS

Person	Full jug
Ava	6 cups
Ben	12 cups

ANSWER _____

2 Maya and Jay play game levels of the same length. Who has finished more of a level? Why is it fair to compare their fractions?

Maya: 3/5



Jay: 4/5



ANSWER _____

CHALLENGE One step up

Three friends cut ribbon from different rolls. Who cuts the most ribbon? Explain why comparing only the fractions would give the wrong answer.

RIBBON CUT

Friend	Full roll	Fraction cut
Ana	6 feet	1/2
Bo	12 feet	1/3
Cal	18 feet	1/6

WORK SPACE AND ANSWER

ANSWER KEY

Same Whole?

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Two same-size pizzas have 1/4 and 3/4 left. Write <, >, or = between 1/4 and 3/4.	**1/4 < 3/4**
2	Sam eats 1/2 of a small cake. Lee eats 1/4 of a large cake. Can you tell who ate more from the fractions alone? Explain.	**No. The cakes are different sizes, so the fractions alone do not tell how much each person ate.**
3	Maya colors 2/6 of a paper strip. Leo colors 4/6 of an equal-size strip. Who colors more?	**Leo**
4	One bottle holds 10 cups. Another holds 20 cups. Compare 1/2 of the first bottle with 1/4 of the second: more, less, or equal?	**Equal, 5 cups each.**

PART 2 · APPLY IT

1. **They drink the same amount, 3 cups each. The fractions alone do not settle it because their jugs hold different amounts.** Ava drinks 1/2 of 6, or 3 cups. Ben drinks 1/4 of 12, also 3 cups.
2. **Jay. It is fair to compare 3/5 and 4/5 because the levels are the same length.** The levels are equal-size wholes. Jay has finished 4/5, which is more than Maya's 3/5.

CHALLENGE

Bo cuts the most: 4 feet. Ana and Cal each cut 3 feet. Comparing only the fractions would give the wrong answer because the full rolls have different lengths.

Accept equivalent wording that identifies different-size wholes as the reason fractions alone cannot be used to compare amounts.