

Fraction Face-Off

Compare fractions with the same numerator.

GRADE 3 • 3.NS.3.f

3.NS.3.f "Compare two fractions (proper or improper) and/or mixed numbers with like numerators of 2, 3, 4, 5, 6, 8, and 10 (e.g., $23 > 28$) using words (greater than, less than, equal to) and/or symbols ($>$, $<$, $=$), using area/region models..."

NAME _____

DATE _____

SAME TOP NUMBER

When two fractions have the same top number, the fraction with the smaller bottom number is greater. Fewer equal parts make each part larger. For mixed numbers, compare the whole numbers first. If the whole numbers match, compare the fractions.

WORKED EXAMPLE

Compare $6/8$ and $6/10$.

- Both fractions have 6 as the numerator.
- One eighth is larger than one tenth because the whole is split into fewer equal parts.
- So $6/8$ is greater than $6/10$.

Answer: $6/8 > 6/10$

PRACTICE 6 problems

- 1** 1. Use the region models. Compare $2/3$ and $2/5$. $2/3$:  $2/5$:  $2/3$ ____ $2/5$

ANSWER _____

- 2** 2. Use the number lines. The dot shows each fraction. Compare $3/4$ and $3/5$. A: 0---
- $1/4$ --- $2/4$ ---● $3/4$ ---1 B: 0--- $1/5$ --- $2/5$ ---●
 $3/5$ --- $4/5$ ---1 $3/4$ ____ $3/5$

ANSWER _____

- 3** 3. Compare $5/3$ and $5/4$. $5/3$ ____ $5/4$

ANSWER _____

- 4** 4. Compare $4/3$ and $4/5$. $4/3$ ____ $4/5$

ANSWER _____

- 5** 5. Compare the mixed numbers. $1 \frac{2}{3}$ ____ $1 \frac{2}{5}$

ANSWER _____

- 6** 6. Compare the mixed numbers. $2 \frac{3}{4}$ ____ $2 \frac{3}{5}$

ANSWER _____

APPLY IT Show your work

- 1** At the school fun run, Nia ran $\frac{5}{3}$ mile. Owen ran $\frac{5}{4}$ mile. Who ran farther? Write a comparison.

WORK SPACE

ANSWER _____

- 2** Ava played a game for $1\frac{3}{4}$ hours. Ben played the same game for $1\frac{3}{5}$ hours. Who played longer? Write a comparison.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Compare $3\frac{2}{5}$ and $2\frac{2}{3}$. Write a comparison and explain using the whole-number parts.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	1. Use the region models. Compare $\frac{2}{3}$ and $\frac{2}{5}$. $\frac{2}{3}$:  $\frac{2}{5}$:  $\frac{2}{3}$ ___ $\frac{2}{5}$	$\frac{2}{3} > \frac{2}{5}$
2	2. Use the number lines. The dot shows each fraction. Compare $\frac{3}{4}$ and $\frac{3}{5}$. A: 0---- $\frac{1}{4}$ ---- $\frac{2}{4}$ ----● $\frac{3}{4}$ ----1 B: 0-- $\frac{1}{5}$ --- $\frac{2}{5}$ ---● $\frac{3}{5}$ --- $\frac{4}{5}$ ---1 $\frac{3}{4}$ ___ $\frac{3}{5}$	$\frac{3}{4} > \frac{3}{5}$
3	3. Compare $\frac{5}{3}$ and $\frac{5}{4}$. $\frac{5}{3}$ ___ $\frac{5}{4}$	$\frac{5}{3} > \frac{5}{4}$
4	4. Compare $\frac{4}{3}$ and $\frac{4}{5}$. $\frac{4}{3}$ ___ $\frac{4}{5}$	$\frac{4}{3} > \frac{4}{5}$
5	5. Compare the mixed numbers. $1\frac{2}{3}$ ___ $1\frac{2}{5}$	$1\frac{2}{3} > 1\frac{2}{5}$
6	6. Compare the mixed numbers. $2\frac{3}{4}$ ___ $2\frac{3}{5}$	$2\frac{3}{4} > 2\frac{3}{5}$

PART 2 • APPLY IT

1. **Nia ran farther. $\frac{5}{3} > \frac{5}{4}$.** Both distances have a numerator of 5. Thirds are larger than fourths, so $\frac{5}{3}$ is greater.
2. **Ava played longer. $1\frac{3}{4} > 1\frac{3}{5}$.** Both times have 1 whole. Fourths are larger than fifths, so $\frac{3}{4}$ is greater than $\frac{3}{5}$.

CHALLENGE

$3\frac{2}{5} > 2\frac{2}{3}$ because 3 wholes is greater than 2 wholes.

Accept either the correct symbol or the matching words greater than, less than, or equal to. For the challenge, accept any clear explanation that 3 whole units is greater than 2 whole units.