

Lesson 28 **NUMBER**

Comparing and ordering fractions with unlike denominators

WHAT THIS LESSON TEACHES

To compare fractions with unlike denominators, first rename them using a common denominator so the parts are the same size.

→ $2/3$ and $3/4$ become $8/12$ and $9/12$.

→ $8/12$ is smaller than $9/12$.

MODEL THIS ON THE BOARD

COMPARING $2/3$ AND $3/4$ USING FOOD SLICES

- 1 Find the common denominator 12 for the thirds and quarters.
- 2 Rename $2/3$ by multiplying top and bottom by 4 to make **$8/12$** .
- 3 Rename $3/4$ by multiplying top and bottom by 3 to make **$9/12$** .
- 4 Compare the new fractions: $8/12$ is less than $9/12$, so $2/3$ is less than $3/4$.

ANSWER KEY

a) $4/12$, $3/12$

b) $15/18$, $14/18$

c) $1/2 < 2/3 < 3/4$

Q1: $3/5 > 4/7$

Q2: $4/5 > 5/8$

Q3: $3/5 > 5/9$

Q4: $3/4$, $5/6$, $7/8$

Q5: $2/5$, $1/2$, $3/4$

a) **Always** — This is the rule for fair comparison.

b) **Never** — The denominators change the size of each part.

c) **Always** — Unlike denominators mean the parts are different sizes.

d) **Sometimes** — It works only when 12 is a multiple of both denominators.

EXTENSION SHEET · STRETCH ANSWERS

S1: $1/12 < 1/8 < 7/12 < 3/4$

S2: $1/5 < 3/4 < 7/8 < 11/12$

S3: $1/8 < 2/5 < 7/10 < 9/10$

S4: $1/12 < 7/12 < 3/4$

S5: $2/5 < 7/10 < 9/10$