

Fraction Size Detectives

Compare one part using lengths and areas.

GRADE 2 • 2.NS.3.f

2.NS.3.f "Compare unit fractions for halves, fourths, eighths, thirds, and sixths using words (greater than, less than or equal to) and symbols ($>$, $<$, $=$), with region/area and length models."

NAME _____

DATE _____

TRY THE IDEA

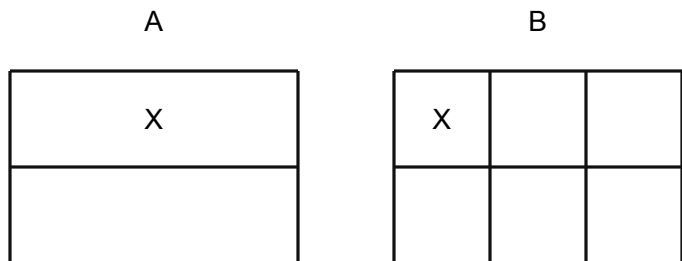
Compare equal-size wholes. A unit fraction names one equal part. Fewer equal parts make each part larger. Write $>$, $<$ or $=$. Say the matching comparison words aloud.

WORKED EXAMPLE

The X marks one part of each equal rectangle. Compare those parts.

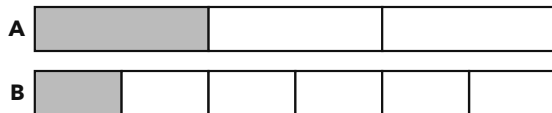
1. A has 2 equal parts; B has 6.
2. One of 2 parts covers more area than one of 6.

Answer: $1/2 > 1/6$. One half is greater than one sixth.



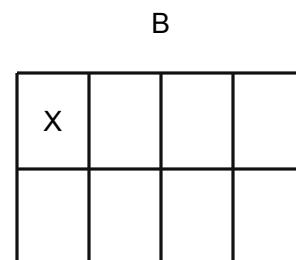
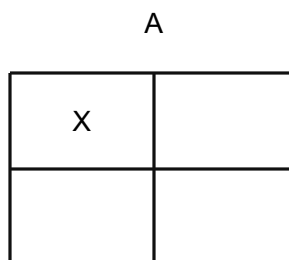
PRACTICE 4 problems

- 1** These strips have equal length. Compare the shaded lengths A and B. Write fractions and a symbol. Say the comparison words aloud.



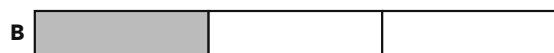
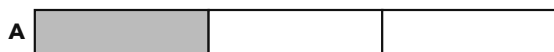
ANSWER _____

- 2** These rectangles have equal area. Compare the parts marked X in A and B. Write fractions and a symbol. Say the comparison words aloud.



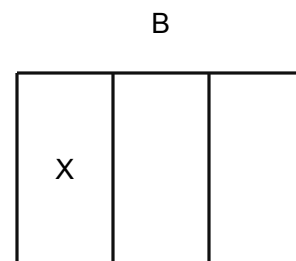
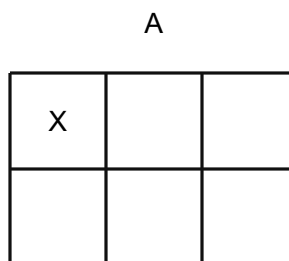
ANSWER _____

- 3** Compare the shaded lengths in the equal strips. Write fractions and a symbol. Say the comparison words aloud.



ANSWER _____

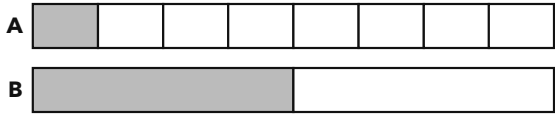
- 4** Compare the X-marked areas in these equal rectangles. Write fractions and a symbol. Say the comparison words aloud.



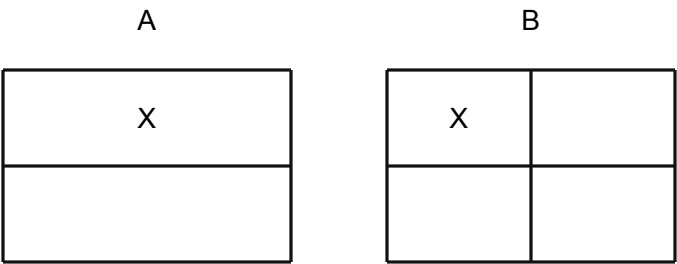
ANSWER _____

APPLY IT Show your work

1 A and B show equal ribbons. Each shaded length is one share. Which share is longer? Write the fraction comparison. Say matching words aloud.

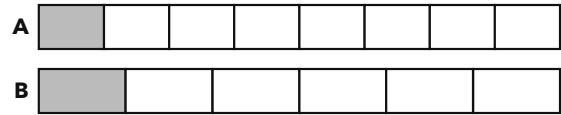


2 The rectangles show equal-size garden beds. Which X-marked share covers more area? Write the fraction comparison. Say matching words aloud.



CHALLENGE One step up

A child says one eighth is greater than one sixth because 8 is greater than 6. Use these equal ribbons to correct the claim. Write symbols and explain aloud.



WORK SPACE AND ANSWER

Read directions aloud as needed. X marks an entire area part; it is not a count of objects. All pairs have equal wholes. Require spoken comparison words and written fraction symbols. The length models compare shaded horizontal distances; the rectangular grids compare areas. Accept oral explanations with the requested written fraction comparisons.

PRACTICE 1

$\frac{1}{3} > \frac{1}{6}$. One third is greater than one sixth.

PRACTICE 2

$\frac{1}{4} > \frac{1}{8}$. One fourth is greater than one eighth.

PRACTICE 3

$\frac{1}{3} = \frac{1}{3}$. One third is equal to one third.

PRACTICE 4

$\frac{1}{6} < \frac{1}{3}$. One sixth is less than one third.

APPLY IT 1

B is longer. $\frac{1}{8} < \frac{1}{2}$. One eighth is less than one half.
Equal whole lengths make a half longer than an eighth.

APPLY IT 2

A covers more. $\frac{1}{2} > \frac{1}{4}$. One half is greater than one fourth.
Both beds have the same area; dividing into two rather than four makes one part larger.

CHALLENGE

$\frac{1}{8} < \frac{1}{6}$. More equal parts in the same whole make each part smaller.