Content Standard	***MAFS.5.NF*** *Number and Operations — Fractions* ***MAFS.5.NF.2*** *Apply and extend previous understandings of multiplication and division to multiply and divide fractions.* **MAFS.5.NF.2.5** Interpret multiplication as scaling (resizing), by: **MAFS.5.NF.2.5a** Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. **MAFS.5.NF.2.5b** Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1.
Assessment Limits	Base numbers should be large to discourage students from calculating products. Scaling is explored or demonstrated only in terms of quantity. Scaling geometric figures should not be assessed at this standard. Scaling quantities of **any** kind in 2 dimensions is strictly beyond the scope of this standard.
Calculator	No
Acceptable Response Mechanisms	Multiple Choice Response Multi-Select Response Natural Language Response
Context	Allowable
Example	
Context	Comparisons are made based on a mix of benchmark fractions, whole numbers, non-benchmark fractions, and mixed numbers/improper fractions.
Context easier	Comparisons are made based strictly on benchmark unit fractions ($\frac{1}{2}$ and $\frac{1}{4}$), whole numbers, and mixed numbers where the fractional part is a benchmark unit fraction.
Context more difficult	Comparisons are made based strictly on non-benchmark fractions and mixed numbers/improper fractions.

Sample Item Stem	Response Mechanism	Notes, Comments
Two newspapers are comparing sales from last year. • The Post sold 34,859 copies. • The Tribune sold 34,589 x $\frac{1}{2}$ copies. Which statement compares the numbers of newspapers sold? A. The Post sold half the number of newspapers that the Tribune sold. B. The Tribune sold half the number of newspapers that the Post sold. C. The Tribune sold twice the number of newspapers that the Post sold. D. The Post sold the same number of newspapers that the Tribune sold.	Multiple Choice Response	
Two newspapers are comparing sales from last year. • The Post sold 34,859 copies. • The Tribune sold one-half as many copies as the Post. Which expression describes the number of newspapers the Tribune sold? A. $34{,}859 \times \frac{1}{2}$ B. $34{,}859 \div \frac{1}{2}$ C. $34{,}859 \times 1\frac{1}{2}$ D. $34{,}859 \div 1\frac{1}{2}$	Multiple Choice Response	

Two newspapers are comparing sales from last year. • The Post sold 34,859 copies. • The Tribune sold one-and-a-half times as many copies as The Post. Which expression describes the number of newspapers The Tribune sold? A. $34{,}859 \times 1\frac{1}{2}$ B. $34{,}859 \div 1\frac{1}{2}$ C. $34{,}859 \times \frac{1}{2}$ D. $34{,}859 \div \frac{1}{2}$	Multiple Choice Response	
Select all the expressions that have a value greater than 1,653. A. $1{,}653 \times \frac{1}{4}$ B. $1{,}653 \times 4$ C. $1{,}653 \times 13$ D. $1{,}653 \times \frac{1}{4}$ E. $1{,}653 \times 1\frac{1}{2}$	Multi-Select Response	
Logan multiplied 54,216 by a number. The product was less than 54,216. Select all the numbers that Logan could have multiplied. A. $\frac{7}{12}$ B. $\frac{4}{4}$ C. $1\frac{1}{4}$ D. $\frac{1}{2}$ E. 3 F. $\frac{8}{4}$	Multi-Select Response	