

Rubric for 5 NF 5

I 5NF5 – Interpret multiplication as scaling (resizing), by: a. 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. b. 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 $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	
4	Student connect scaling to proportional relationships. Student can teach any of the concepts in level 3 to other Student effectively.
3	Student can consistently do <u>all</u> of these: <ul style="list-style-type: none"> 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. explain why multiplying a given number by a fraction greater than 1 will result in a product greater than the given number Explain why multiplying a given number by a fraction less than one will result in a product smaller than the given number Relate the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
2	Student can do <u>three</u> of the following: <ul style="list-style-type: none"> 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. explain why multiplying a given number by a fraction greater than 1 will result in a product greater than the given number Explain why multiplying a given number by a fraction less than one will result in a product smaller than the given number Relate the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
1	Student has minimal or no understanding of multiplication as scaling

Consistent is defined as successful demonstration on three or more consecutive attempts.

4 = Exceeds standard

3 = Meets standard consistently

2 = Does not yet meet standard, is inconsistent

1 = Warning: Significantly below standard

NA = Standard not addressed this trimester

I Major Content

 Supporting Content

 Additional Content