Lesson 19: Comparemos con 1

Standards Alignments

Addressing   5.NF.B.5.b
Building Towards   5.NF.B.5.b

Teacher-facing Learning Goals

- Explain what happens to a given fraction when multiplied by a fraction greater than or less than 1.

Student-facing Learning Goals

- Expliquemos qué sucede cuando multiplicamos una fracción por una fracción que es mayor que, menor que o igual a 1.

In previous lessons, students have compared the size of a product to the size of one factor by reasoning about the size of the other factor. They have done this using calculation, area diagrams, and number line diagrams. The goal of this lesson is to use the distributive property to explain why the comparisons work in all cases without calculating. The key observation is that a number greater than 1, such as $\frac{5}{4}$, can be written as $1 + \frac{1}{4}$ so multiplying by $\frac{5}{4}$ increases any number by $\frac{1}{4}$ of that number. In the same way multiplying by $\frac{3}{4}$ or $1 - \frac{1}{4}$ decreases any number by $\frac{1}{4}$ of that number.

This lesson has a Student Section Summary.

Access for:

🧑‍🦯 Students with Disabilities

- Engagement (Activity 2)

🌐 English Learners

- MLR8 (Activity 1)

Instructional Routines

What Do You Know About _____? (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min
Lesson Synthesis	10 min

Teacher Reflection Question

During the last two lessons, students have noticed and explained patterns and generalizations about multiplying by numbers greater than, less than, and equal to 1. What are some ways that you honored student language while strategically incorporating more precise academic language?

Cool-down (to be completed at the end of the lesson)   🕐 5 min

Compara sin calcular

Standards Alignments

Addressing   5.NF.B.5.b

Student-facing Task Statement

1. ¿$\left(1 - \frac{16}{33}\right) \times \frac{11}{14}$ es mayor que, igual a o menor que $\frac{11}{14}$? Explica o muestra cómo razonaste.

2. ¿$\frac{49}{33} \times \frac{11}{14}$ es mayor que, igual a o menor que $\frac{11}{14}$? Explica o muestra cómo razonaste.

Student Responses

1. Less than $\frac{11}{14}$, because it's $\frac{11}{14}$ minus some amount.

2. Greater than $\frac{11}{14}$, because it's $\frac{11}{14}$ plus some amount as I can see by rewriting $\frac{49}{33}$ as $1 + \frac{16}{33}$.