Lesson 13: Multiplication Equations

Standards Alignments

Addressing   3.OA.A.1, 3.OA.A.3

Teacher-facing Learning Goals

- Relate equations to multiplication situations and diagrams.
- Write equations for multiplication situations and diagrams using a symbol for the unknown number.

Student-facing Learning Goals

- Let's learn about multiplication equations.

Lesson Purpose

The purpose of this lesson is for students to relate multiplication equations to situations and diagrams and write equations.

In previous lessons students represented situations and diagrams with multiplication expressions. In this lesson, students learn the meaning of **factor** and **product**. Students do not have to use the vocabulary in this lesson as they will continue to have opportunities to do so throughout the year. In future lessons, students will represent situations and diagrams with equations that use a symbol for the unknown number, which may be either a factor or the product.

Consider continuing to use the convention of groups as the first factor and the size of the groups as the second factor when writing equations. However, it is not necessary for students to write the factors in this order. It is important that students connect their equations to the corresponding situations and representations (MP2). They should be able to correctly explain what each factor represents in their equations. If students ask questions about the idea of commutativity, consider recording the questions publicly for future investigation.

Access for:

♿ Students with Disabilities

- Engagement (Activity 2)

🌐 English Learners

- MLR7 (Activity 2)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	15 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

How were the terms factor and product helpful as students began working with multiplication equations?

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

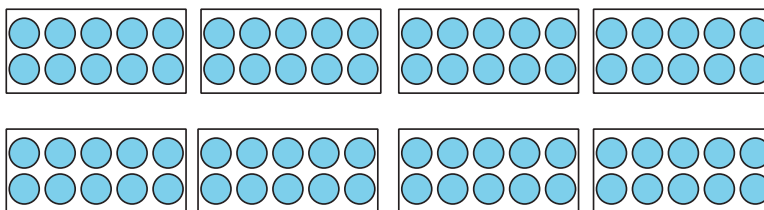Match the Equation

Standards Alignments

Addressing   3.OA.A.1

Student-facing Task Statement

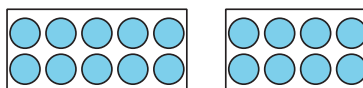Select **all** the drawings, diagrams, and situations that could represent the equation.
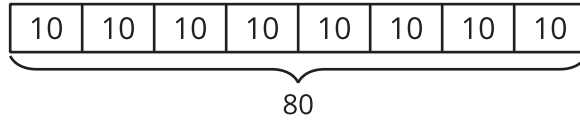
$$80 = 8 \times 10$$

A.

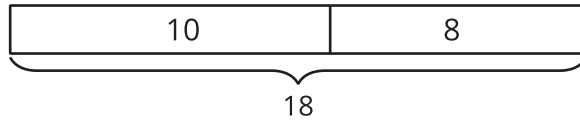B. Andre has 8 boxes. Each box has 10 cars in it. He has 80 cars altogether.

C.

D.

| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

80

E. Andre had 8 boxes. Then, he found 10 more boxes. How many boxes does Andre have?

F.

| 10 | 8 |

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Student Responses

A, B, and D