# Lesson 1: Estimate and Find Products

## Standards Alignments

Building On   4.NBT.B.5
Addressing   5.NBT
Building Towards 5.NBT.B.5

## Teacher-facing Learning Goals

- Multiply multi-digit numbers in a way that makes sense to them.

## Student-facing Learning Goals

- Let's estimate and calculate products.

## Lesson Purpose

The purpose of this lesson is for students to make estimates and calculations of products.

In grade 4, students multiplied two-digit by two-digit and one-digit by up to four-digit numbers using strategies based on place value understanding and the properties of operations. Students learned a partial product strategy for multiplication and represented it with diagrams and equations. This lesson gives teachers an opportunity to see how students apply previous work to estimate and find products. Expect to see a wide range of strategies from students and be sure to listen to them as they explain their reasoning. In the synthesis, the strategies highlighted involve place value and properties of operations which will be built on in future lessons.

## Access for:

### ⊙ Students with Disabilities

- Engagement (Activity 1)

## Instructional Routines

MLR7 Compare and Connect (Activity 2), Number Talk (Warm-up)

## Lesson Timeline

| | |
|---|---|
| Warm-up | 10 min |
| Activity 1 | 15 min |
| Activity 2 | 20 min |

## Teacher Reflection Question

What unfinished learning or misunderstandings do your students have about multiplication? How did you leverage those misconceptions in a positive way to further the understanding of the class?

| Lesson Synthesis | 10 min |
| Cool-down | 5 min |

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

Fifteen

### Standards Alignments

Building Towards      5.NBT.B.5

### Student-facing Task Statement

Find the value of each expression. Explain or show your reasoning.

1. $15 \times 20$
2. $15 \times 120$
3. $15 \times 121$

### Student Responses

1. 300 since $2 \times 15 = 30$ and I did 10 times that.
2. 1,800 since $100 \times 15 = 1,500$ and I added that to 300.
3. 1,815 since there is one more in each of the 15 groups.