

Lesson 17: Apply Rounding

Standards Alignments

Addressing 4.NBT.A.3
Building Towards 4.NBT.A.3

Teacher-facing Learning Goals

- Describe how rounding can help or hinder problem-solving.
- Round multi-digit whole numbers within 1,000,000 to solve problems.

Student-facing Learning Goals

- Let's round large numbers to learn about situations and solve problems.

Lesson Purpose

The purpose of this lesson is for students to use rounding to learn about situations and solve problems involving multi-digit whole numbers within 1 million.

Previously, students extended their knowledge of rounding to the nearest 1,000, 10,000, and 100,000. They began to generalize strategies for rounding any number within 1,000,000 to any place. In this lesson, students practice rounding such numbers and interpret the rounded numbers in context in order to solve problems. In doing so, they practice reasoning quantitatively and abstractly (MP2). Students also learn the benefits and limitations of rounding numbers when solving problems.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR7 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	20 min

Teacher Reflection Question

What surprised you about students' thinking in today's activities? What reasoning strategies did you anticipate? What did you not anticipate?

Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	10 min
Cool-down	5 min

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

 5 min

Spatial Distancing

Standards Alignments

Addressing 4.NBT.A.3

Student-facing Task Statement

Planes are too close when their altitudes are within 1,000 feet of each other when they fly over the same area.

- Jada says planes C and E are too close.
- Noah says planes C and E are a safe-distance apart.

Use rounding to explain how both statements might be correct.

plane	altitude (feet)
A	40,990
B	39,524
C	36,138
D	40,201
E	35,472
F	30,956

Student Responses

Sample response: Jada might have thought about the actual distance between the two planes, which is only about 700 feet apart, or might have rounded to the nearest hundred (C would round to 36,100 and E to 35,500). If Noah rounded to the nearest thousand, plane C would round to 36,000 and E would round to 35,000, which is 1,000 feet apart.