

Grade 3 Unit 3

Lesson 11

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Unit 3 Lesson 11: Analyze Subtraction Algorithms**WU Number Talk: Subtract within 1,000 (Warm up)**

Student Task Statement

Find the value of each expression mentally.

- $400 - 200$
- $450 - 200$
- $450 - 205$
- $450 - 215$

1 Compare Two Subtraction Algorithms

Student Task Statement

1. The first steps of two algorithms are shown.

Algorithm A, step 1

$$\begin{array}{r} 4 \ 10 \\ \cancel{5} \ \cancel{0} \ 8 \\ - 1 \ 5 \ 6 \\ \hline \end{array}$$

Algorithm B, step 1

$$\begin{array}{r} 5 \ 0 \ 8 \\ - 1 \ 5 \ 6 \\ \hline 2 \end{array}$$

How are the steps different?

2. Use each algorithm to find the value of $824 - 541$.

2 Use an Algorithm?

Student Task Statement

Noah wanted to find the value of $301 - 167$ and wrote:

$$\begin{array}{r} 3 \ 0 \ 1 \\ - 1 \ 6 \ 7 \\ \hline \end{array}$$

Elena said that we can't subtract this way because we would need more ones to subtract 7 ones, but there's a zero in the tens place of 301.

1. Do you agree with Elena's statement? Explain your reasoning.
2. Show how you would use an algorithm (either Noah's or another algorithm) to find the difference between 301 and 167.