## Unit 5 Lesson 10: Using Long Division

### 1 Number Talk: Estimating Quotients (Warm up)

#### Student Task Statement

Estimate these quotients mentally.

$500÷7$

$1,​394÷9$

### 2 Lin Uses Long Division

#### Student Task Statement

Lin has a method of calculating quotients that is different from Elena’s method and Andre’s method. Here is how she found the quotient of $657÷3$:



1. Discuss with your partner how Lin’s method is similar to and different from drawing base-ten diagrams or using the partial quotients method.
	* Lin subtracted $3⋅2,$ then $3⋅1$, and lastly $3⋅9$. Earlier, Andre subtracted $3⋅200,$ then $3⋅10$, and lastly $3⋅9$. Why did they have the same quotient?
	* In the third step, why do you think Lin wrote the 7 next to the remainder of 2 rather than adding 7 and 2 to get 9?
2. Lin’s method is called **long division**. Use this method to find the following quotients. Check your answer by multiplying it by the divisor.
	1. $846÷3$
	2. $1,​816÷4$
	3. $768÷12$

#### Activity Synthesis



### 3 Dividing Whole Numbers (Optional)

#### Student Task Statement

1. Find each quotient.
	1. $633÷3$
	2. $1001÷7$
	3. $2996÷14$
2. Here is Priya’s calculation of $906÷3$.
* 
	1. Priya wrote 320 for the value of $906÷3$. Check her answer by multiplying it by 3. What product do you get and what does it tell you about Priya’s answer?
	2. Describe Priya’s mistake, then show the correct calculation and answer.



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