

## **Lesson 5: Another Addition Algorithm**

• Let's learn another algorithm to add.

## Warm-up: Notice and Wonder: Another Curious Table

What do you notice? What do you wonder?

+	98	99	100	101	102
98		197		199	
99	197		199		201
100		?		?	
101	199		201		203
102		201		203	



## 5.1: A New Addition Algorithm

Here are two algorithms for adding 367 + 231.

Han's algorithm

	3	6	7	
+	2	3	1	
			8	step 1
		9	0	step 2
+	5	0	0	step 3
	5	9	8	step 4

Elena's algorithm

			8	step 1	_		9	8	step 2		5	9	8	step 3
+	2	3	1		+	2	3	1		+	2	3	1	
	3	6	7			3	6	7			3	6	7	

Discuss with your partner:

1. How is Elena's algorithm different from Han's algorithm?

2. Why do both algorithms work?

## 5.2: Compose New Units

Here are two algorithms for adding 365 + 182.

Han's algorithm

	3	6	5	
+	1	8	2	
			7	step 1
	1	4	0	step 2
+	4	0	0	step 3
_	5	4	7	step 4

Elena's algorithm

			7	step 1			4	7	step 2		5	4	7	step 3
+	1	8	2		+	1	8	2		+	1	8	2	
	3	6	5			3	6	5			3	6	5	
						1	0	0			1	0	0	

1. How do the algorithms show the 14 tens differently?

2. Try Elena's algorithm to find the value of each sum.

a. 174 + 352



b. 273 + 619

c. 354 + 198

d. 525 + 376