

Using Base Ten Blocks for Addition

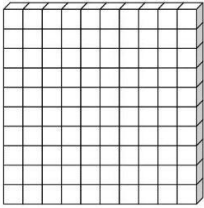
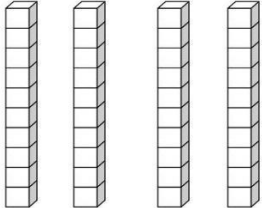
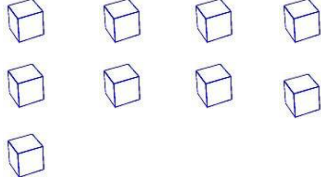
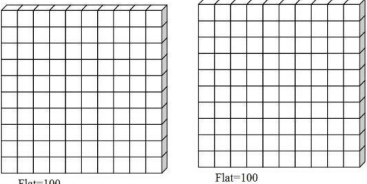
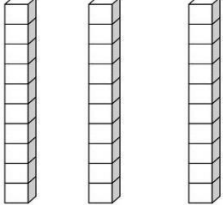

Common Core Standards

2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

- a. 100 can be thought of as a bundle of ten tens—called a "hundred."
- b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

$$149 + 234 =$$

Hundreds	Tens	Ones
 Flat=100 1	 Rod=10 Rod=10 Rod=10 Rod=10 4	 9
 Flat=100 Flat=100 2	 Rod=10 Rod=10 Rod=10 3	 4
3	7	13
3	7 + 1 = 8	3
3	8	3

383

- First, you show the first addend in base ten blocks (149)
- Next, show the second addend in base ten blocks (234)
- Add all the ones together (13), an adjustment must be made through a trade. In this case, the ones and the tens columns need adjusting because we must take a group of "10" bits from the ones column; and add it to the tens column. (13 - 10 =) **3**
- Add all the tens together (7), in this case no trading adjustment needs to be made. However, you must include the trade from the ones column you now have (7+1 =) **8**.
- Add all the hundreds together (3), in this case no trading adjustment needs to be made **3**.
- $149 + 234 = \mathbf{383}$

Using Base Ten Blocks for Subtraction

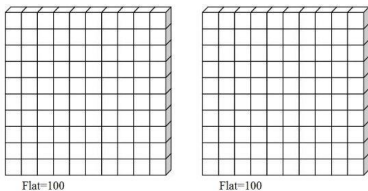
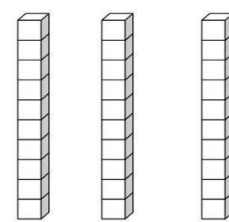

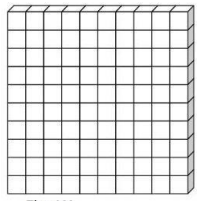
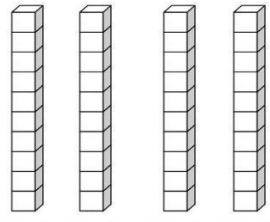
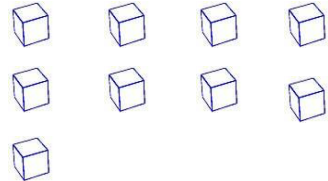
Common Core Standards

2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

- a. 100 can be thought of as a bundle of ten tens—called a "hundred."
- b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

$$234 - 149 =$$

Hundreds	Tens	Ones
 Flat=100 Flat=100 2	 Rod=10 Rod=10 Rod=10 3	 4
 Flat=100 1	 Rod=10 Rod=10 Rod=10 Rod=10 4	 9
	2 - 1 = 3	10 + 4 - 9 =
	10 + 2 - 4	14 - 9 =
	12 - 4	
	8	5

85

- First, you show the first number (minuend) in base ten blocks (234)
- Next, show the second number (subtrahend) in base ten blocks (149)
- Subtract the ones (4 - 9), an adjustment must be made through a trade.
In this case, the ones and the tens columns need adjusting because we must take a group of "10" rod from the tens column; and add it to the ones column. $10 + 4 - 9 = 14 - 9 = 5$
- Subtract the tens (3 - 4), an adjustment must be made through a trade.
In this case, the tens and the hundreds columns need adjusting because we must take a group of "100" flat from the hundreds column; and add it to the tens column. $(10 + 2 - 4) = 12 - 4 = 8$.
- Subtract the hundreds (1 - 1), in this case no trading adjustment needs to be made 0.
- $234 - 149 = 85$