Brick Math

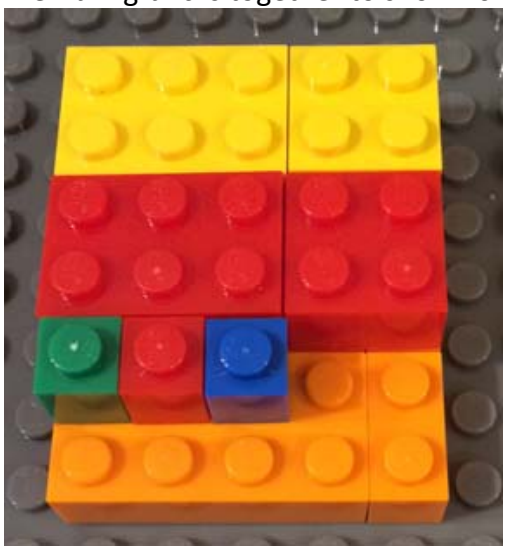
Addition Using LEGO® Bricks

Student Chapter Assessments - Answer Key

Chapter 1

1. Bricks model two ten-frames that each show 10, and a third ten-frame with 3

Then bring bricks together to show 10 + 10 + 3 = 23



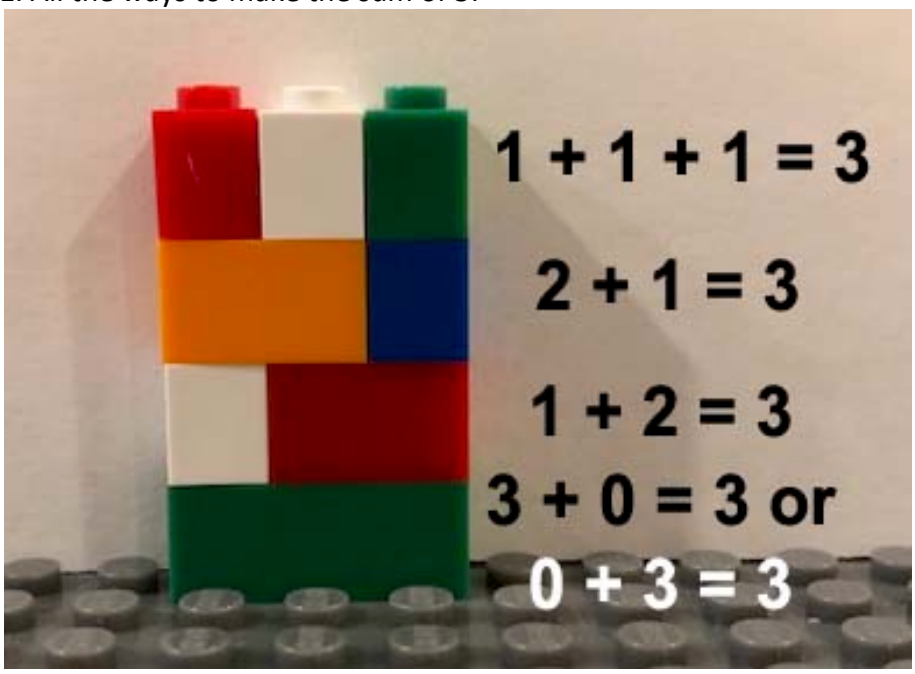
2. (addends in red)
8 + **3** = 11
5 + **5** = 10

3. Sum

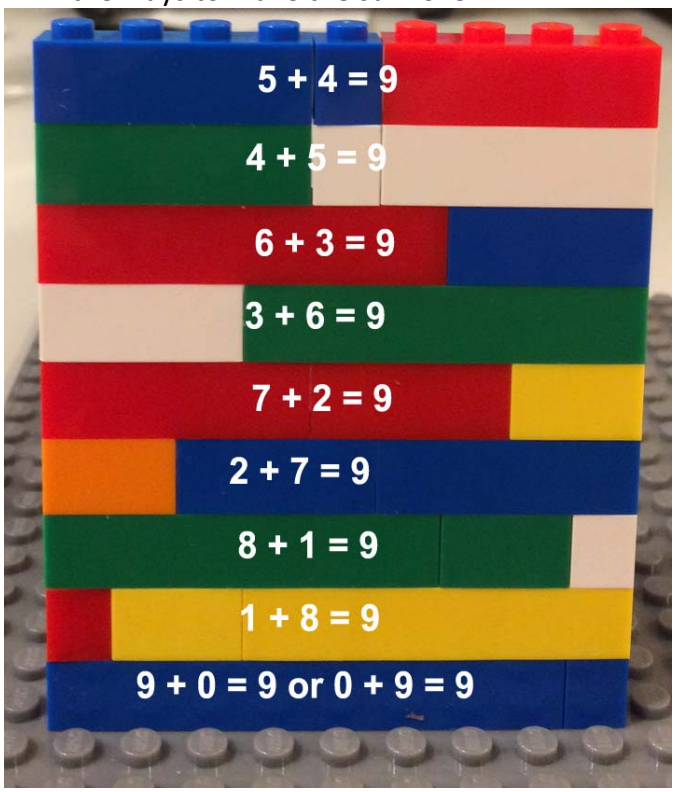
4. Solutions will vary

Chapter 2

1. All the ways to make the sum of 3:

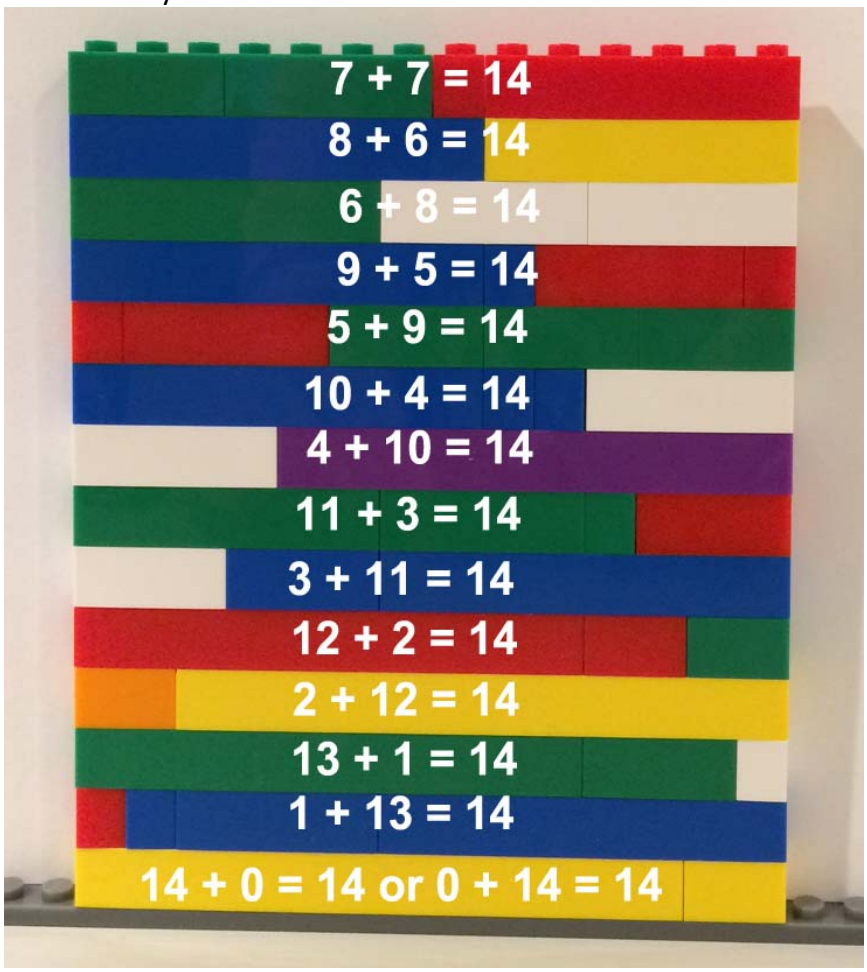


2. All the ways to make the sum of 9:



Students may model equations with three-number combinations for more variations

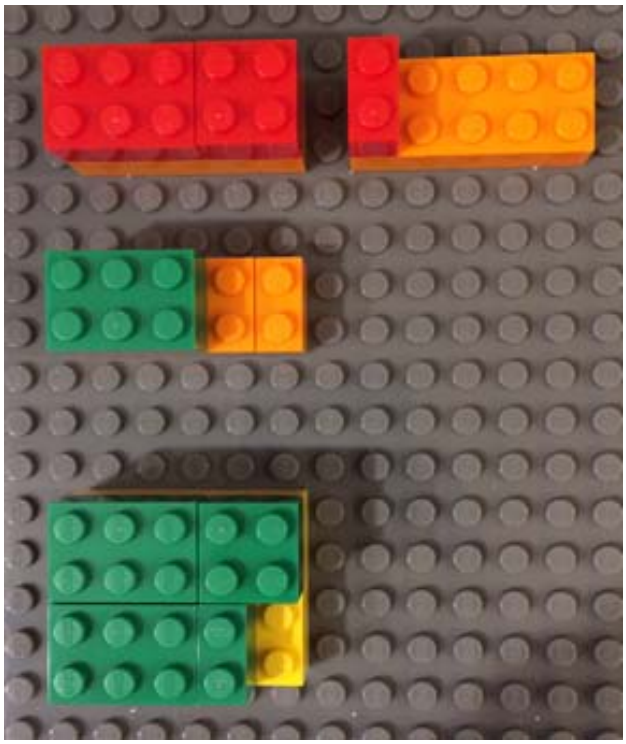
3. All the ways to make the sum of 14:



Students may model equations with three-number combinations for more variations.

Chapter 3

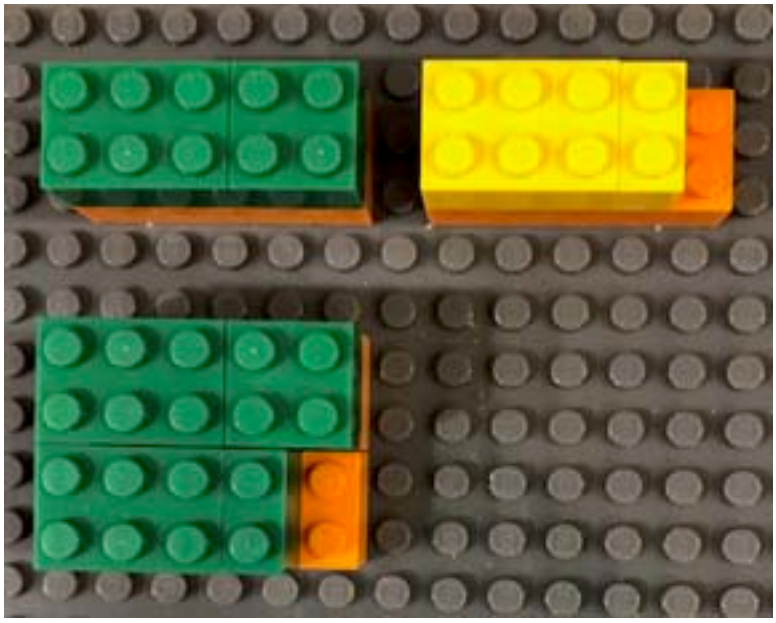
1. 12 + 6 = 18



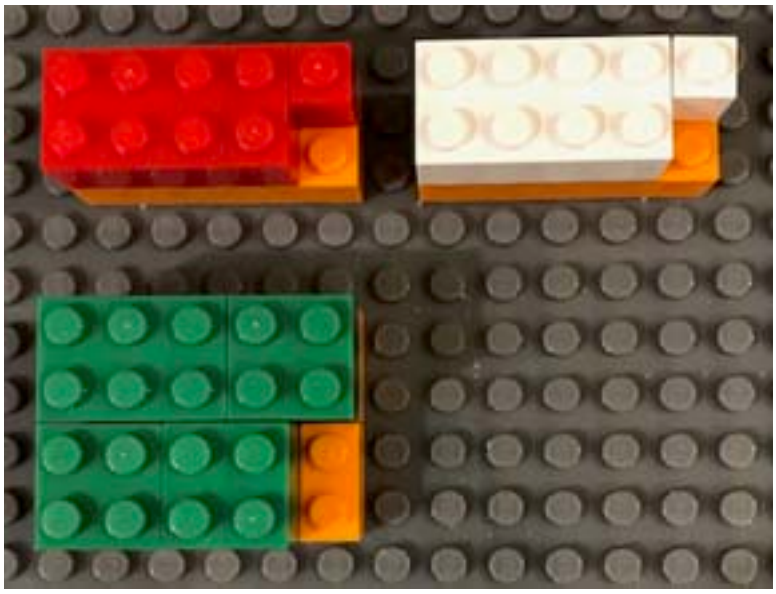
2. Solutions will vary. Model shown here for 10 + 4 = 14

3. Solutions will vary. Models shown here for:

10 + 8 = 18



9 + 9 = 18

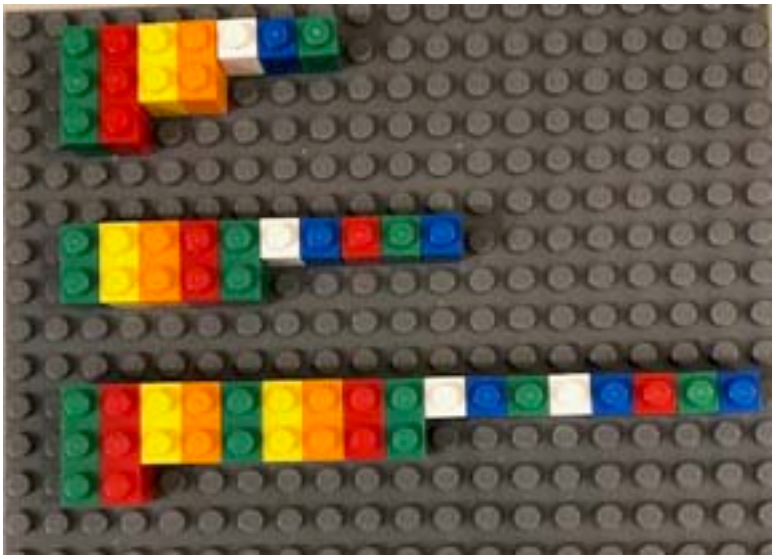


Chapter 4

1.

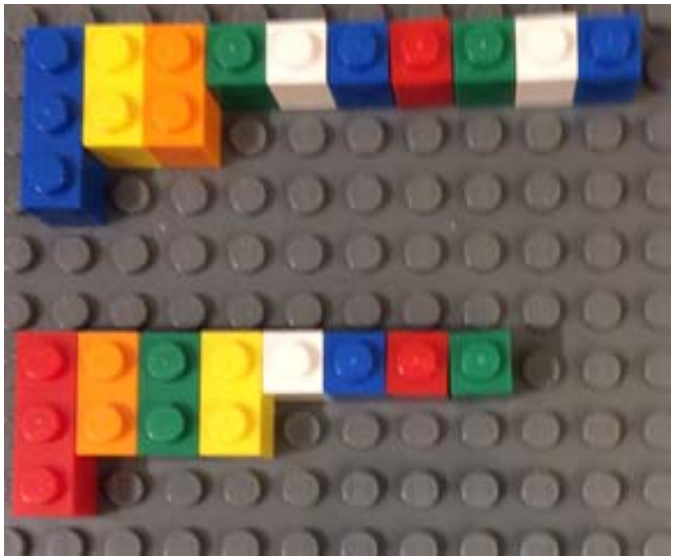
Yellow and orange 1x2 bricks model the number in the tens place

2. 223 + 55 = 278



3. 127 + 134

Model the numbers:



Model the addition:

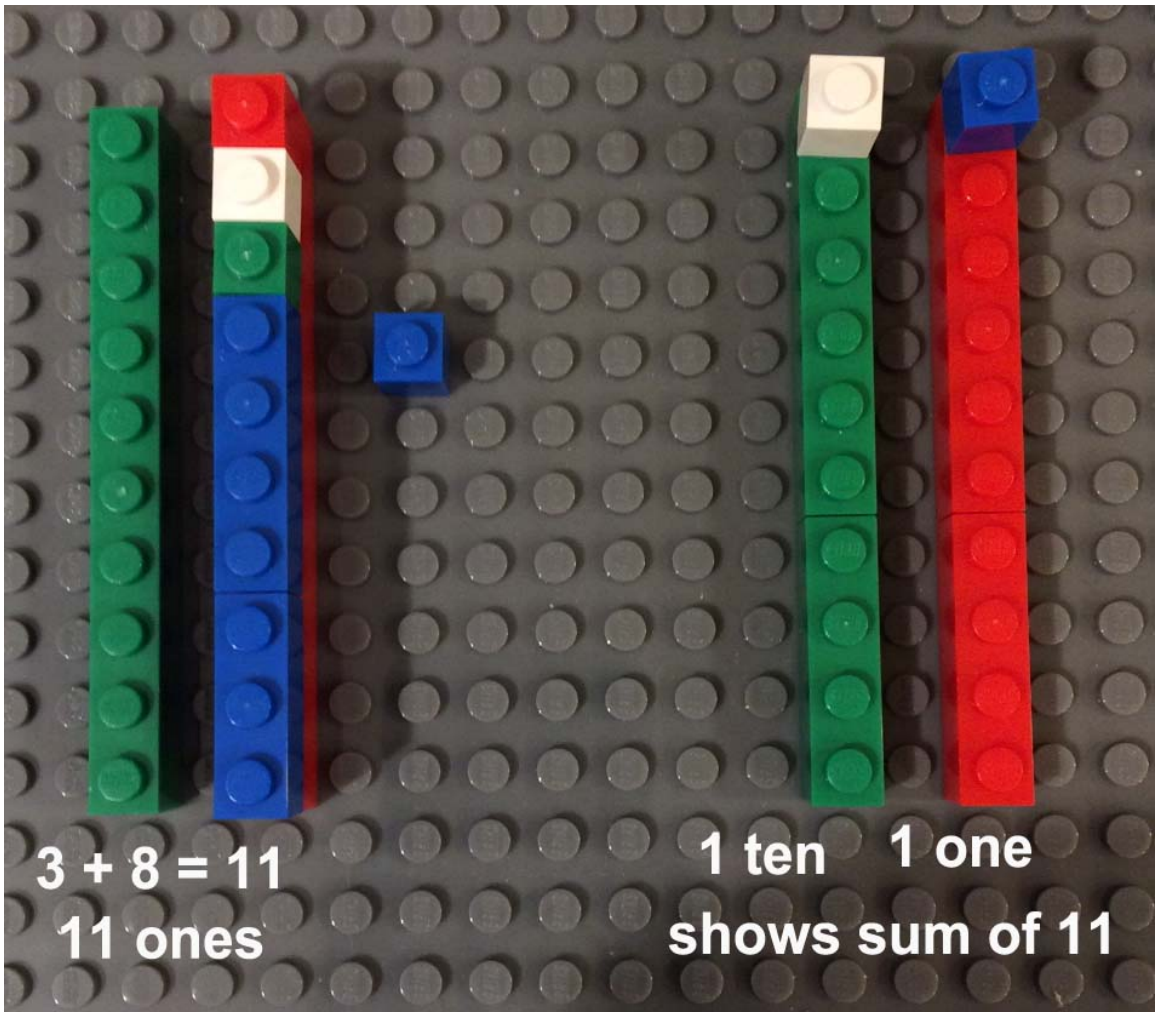
Model the decomposition of 11 ones to 1 ten and 1 one

127 + 134 = 261

Chapter 5

1. 6 + 7 = 13 (addends in red)

2.

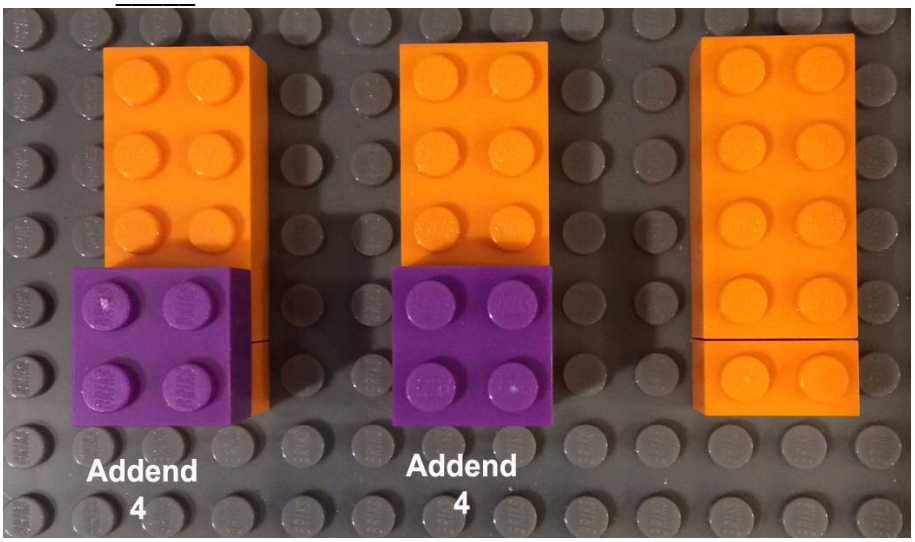


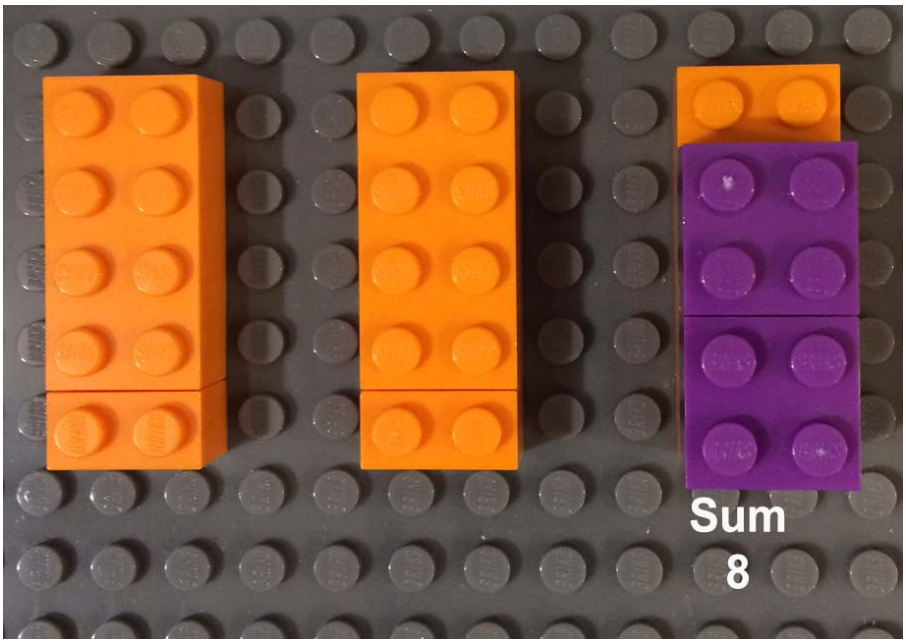
3. expanded form of 14: __1__ ten and __4__ ones

Chapter 6

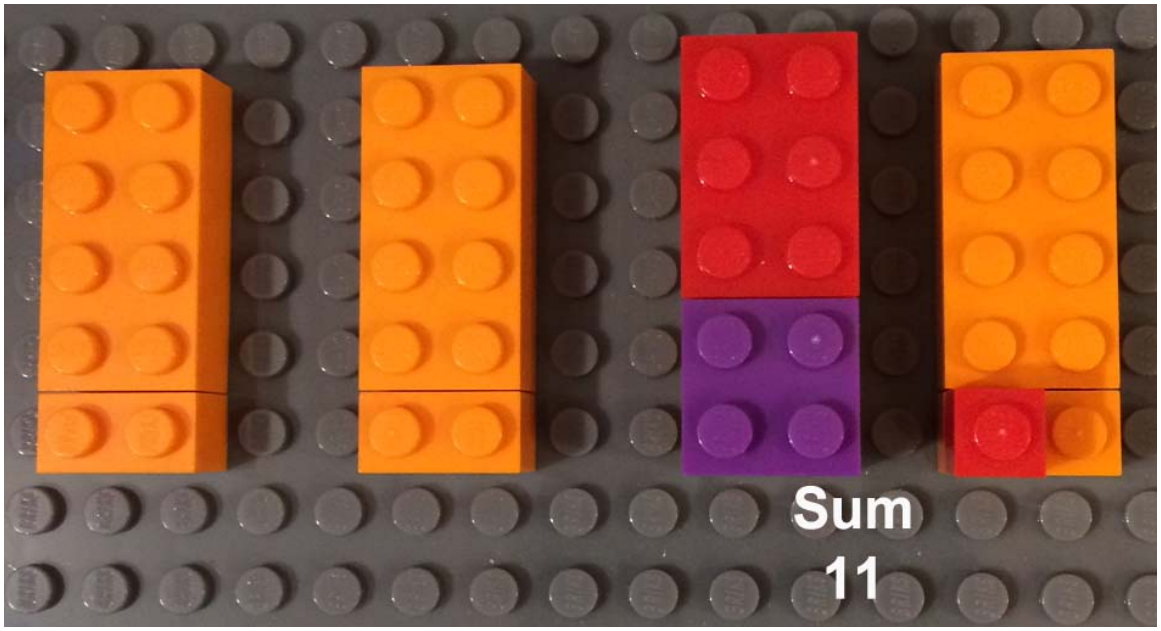
1. The result in an addition problem is called the **sum**.

2. 4 + 4 = _____





3.



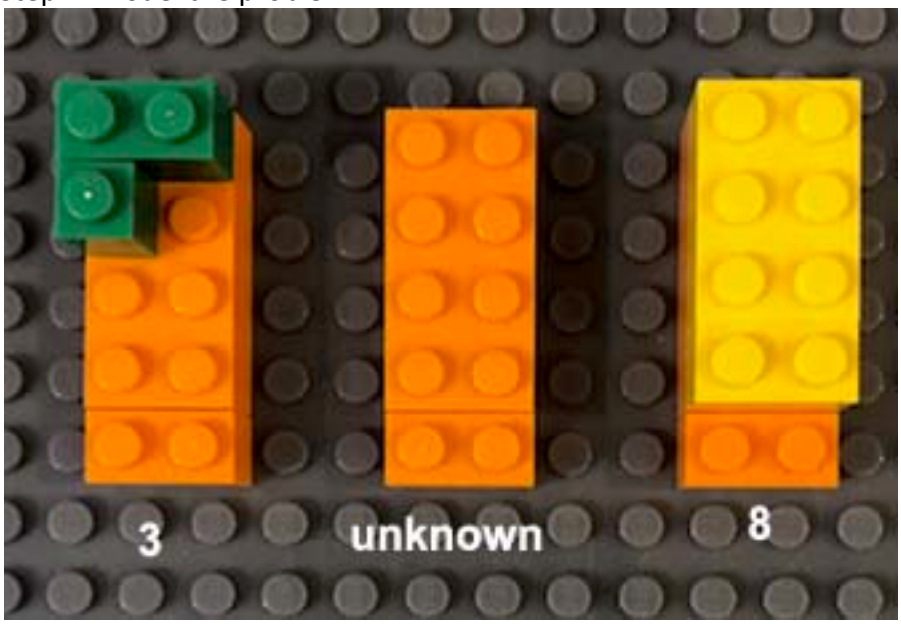
Chapter 7

1. **7** + **2** = 9 (addends in red)

2. **6** + **box** = 10 (addends in red)

3. 3 + 4 = **7 (sum in red)**

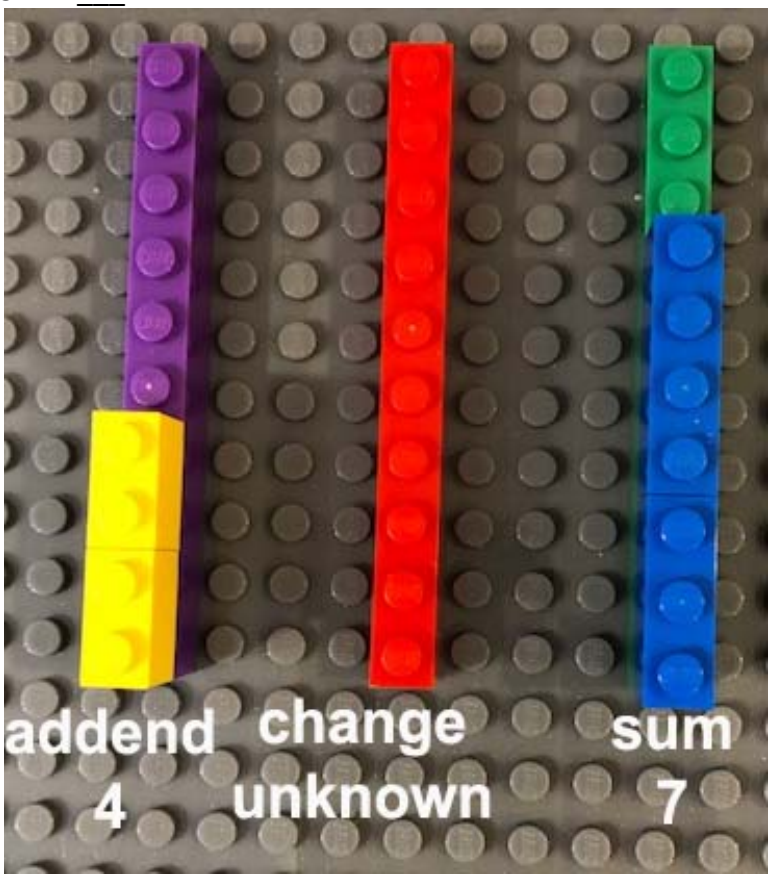
4. 3 + box = 8
Step 1: Model the problem



Step 2: Compare addend 3 with sum 8 by placing bricks from addend on top of bricks for sum and counting 5 studs uncovered

Step 3: Model shows solution: 3 + 5 = 8

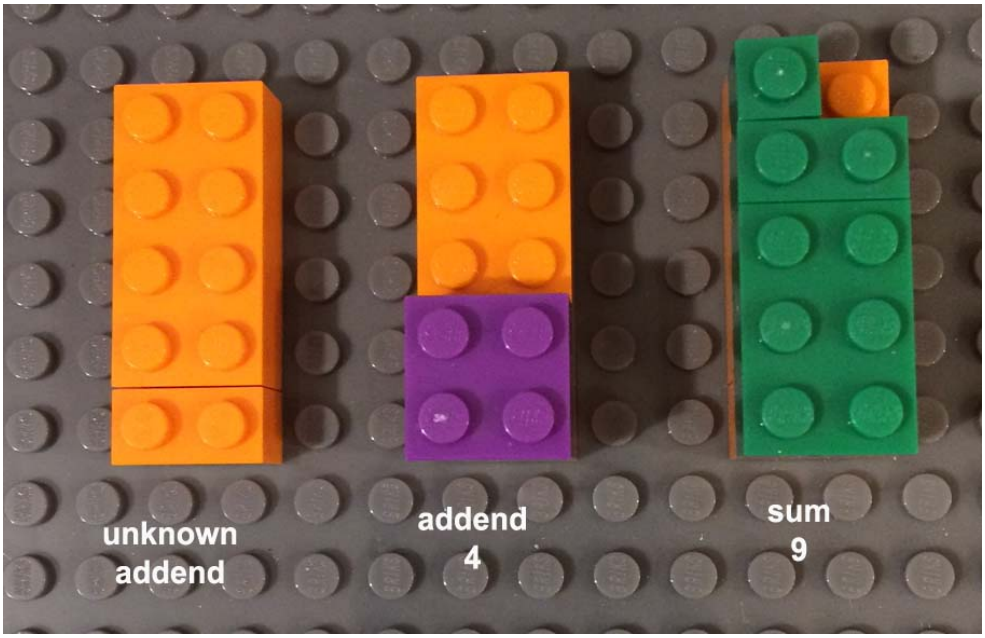
5. 4 + ___ = 7



Chapter 8

1. 4 + 2 = 6 Addend _4_ Addend _2_ Sum _6_
   6 + 3 = 9 Addend _6_ Addend _3_ Sum _9_

2.



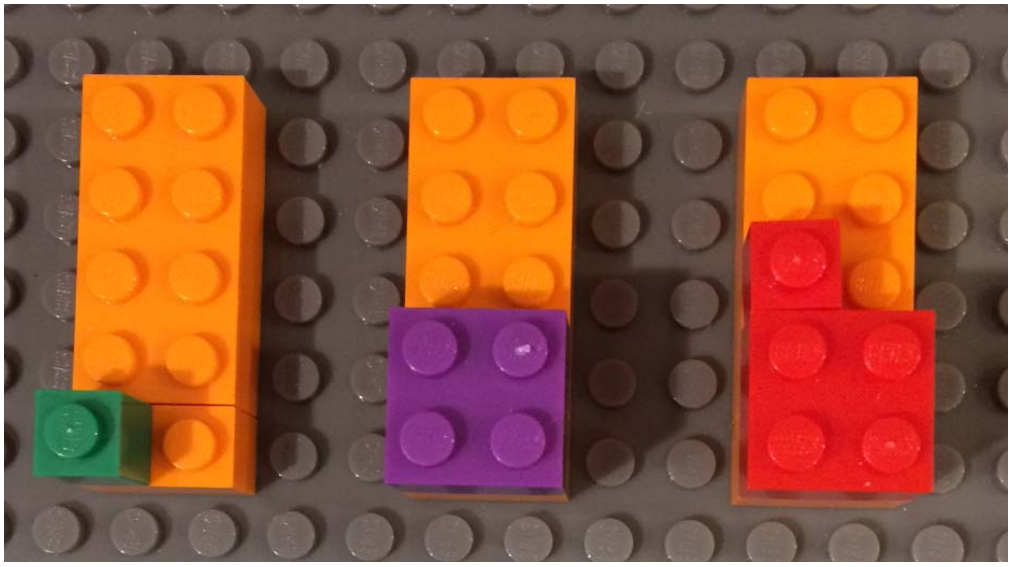
3. ___ + 4 = 5

Model of problem:

Finding the start unknown number by comparing the change addend (4) to the sum (5):

Model showing the solution to the problem:

1 + 4 = 5



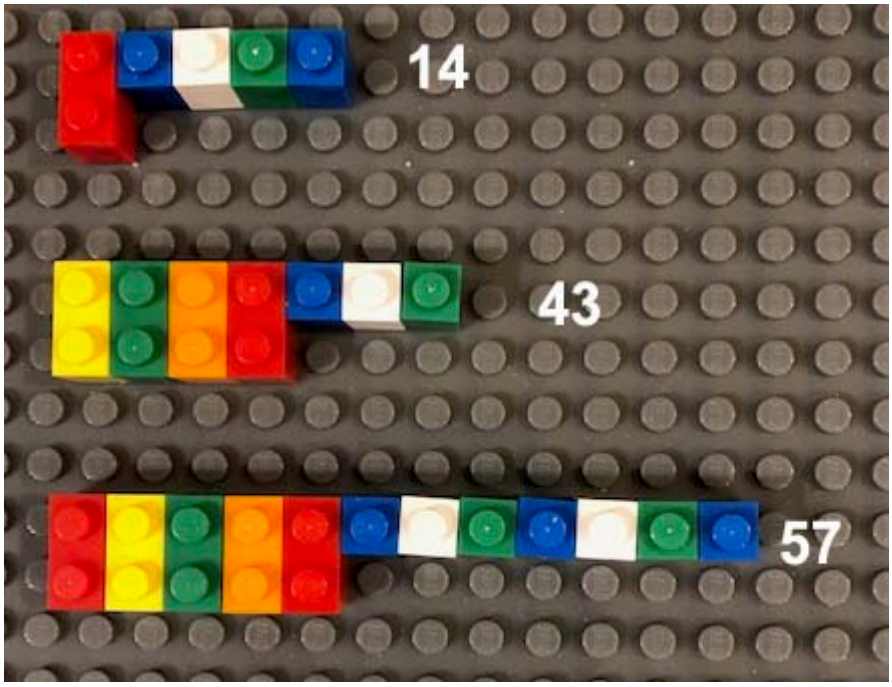
4. ____ - 6 = 3

9 – 6 = 3

Chapter 9

1. The solution to an addition problem is called the **sum.**

2. 14 + 43 = 57



3. The model shows 12 + 21 = 33