

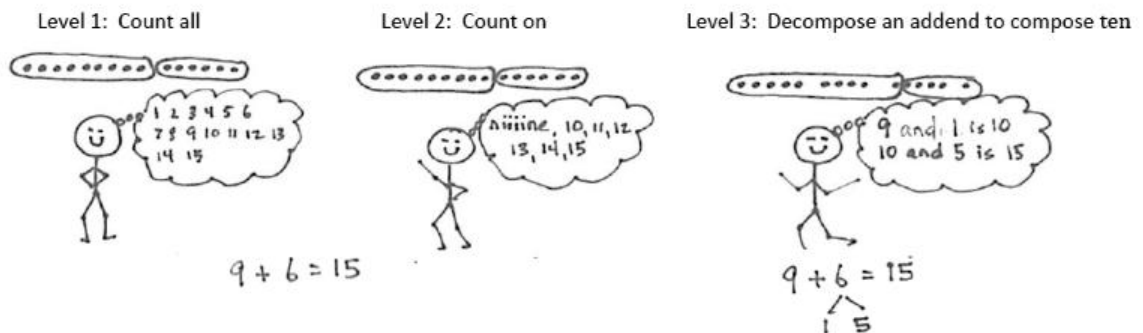
Grade 1 Module 2 – Introduction of Place Value Through Addition and Subtraction Within 20

Vocabulary:

- A ten (Students will focus mainly on *one* ten during this module.)
- Ones (These are individual units, ten of which become a ten.)

Overview:

- In Module 1, students were encouraged to move beyond the Level 1 strategy of counting all to the more efficient counting on. Now they go beyond Level 2 to learn Level 3 decomposition and composition strategies, informally called make ten or take from ten.



Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems

- students solve problems with three addends and realize it is sometimes possible to use the associative and commutative properties to compose ten
- e.g., “Maria made 1 snowball. Tony made 5 and their father made 9. How many snowballs did they make in all?”

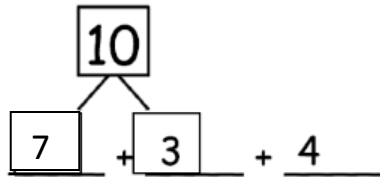
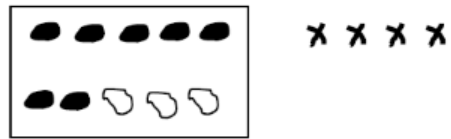
$$\begin{array}{l}
 1 + 5 + 9 = \\
 \textcircled{1} + 5 + \textcircled{9} = \\
 \textcircled{9} + \textcircled{1} + 5 = \\
 \swarrow \quad \searrow \\
 10 + 5 = 15
 \end{array}$$

$$\begin{array}{l}
 1 + 9 + 5 \\
 \swarrow \quad \searrow \\
 10 + 5 = 15
 \end{array}$$

Since we can add in any order, we can pair the 1 with the 9 to make a ten first. Having seen how to use partners to ten to simplify addition, students next decompose a second addend in order to compose a ten from 9 or 8

Circle the numbers that make ten. Draw a picture. Complete the number sentence.

1. $7 + 3 + 4 = \square$

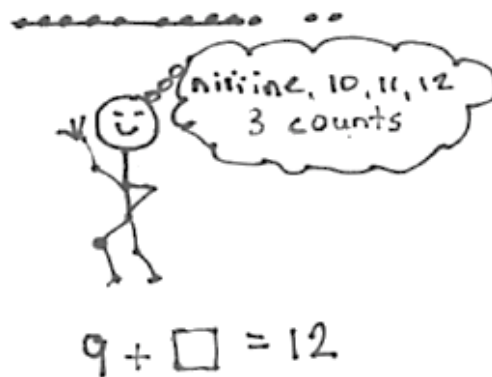


$10 + 4 = 14$

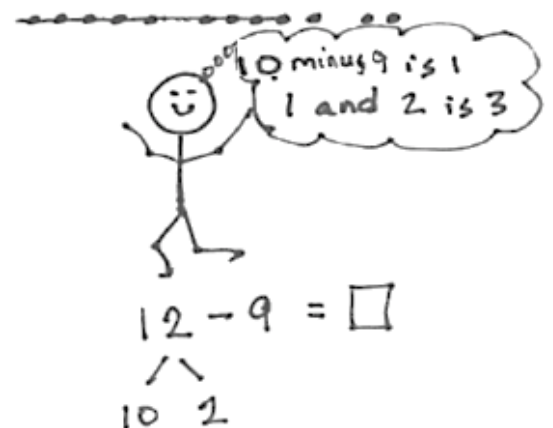
Topic B: Counting On or Taking from Ten to Solve Result Unknown and Total Unknown Problems

- Take from ten strategy
 - “Mary has two plates of cookies, one with 10 and one with 2. At the party, 9 cookies were eaten from the plate with 10 cookies. How many cookies were left after the party?”
 $10 - 9 = 1$ and $1 + 2 = 3$. Students then reinterpret the story to see its solution can also be written as $12 - 9$.

Level 2: Count on



Level 3: Decompose ten and compose with the ones



To solve $12 - 9$, I count on from 9 to 12, nine, 10, 11, 12, three counts. →
 To solve $12 - 9$, I make 12 into 10 and 2 and subtract 9 from ten. $1 + 2 = 3$.

Topic C: Strategies for Solving Change or Addend Unknown Problems

- These situations give ample time for exploring strategies for finding a missing part
- The get to ten strategy has students solving $12 - 3$ as $12 - 2 - 1$, understanding that decomposing the subtrahend to easily get to the ten yields a simpler, more manageable subtraction problem
- They can apply many strategies such as counting on, counting back, taking from ten, or getting to ten to accurately solve this challenging problem type
- Find matching expressions to create true number sentences. They work solely with equations to show and talk about how they would re-represent a given addition or subtraction problem using a Level 2 or Level 3 strategy.
 - For example, when given $9 + 6$, students decompose the 6 into 1 and 5, and then can add using their new number sentence $10 + 5$, (i.e., $9 + 6 = 10 + 5$)

Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones

- The ten is shifting to being one unit, a structure from which they can compose and decompose teen numbers
- This significant step forward sets the stage for understanding all the numbers within 100 as composed of a number of units of ten and some ones
- As students write their solutions, they break apart an addend to make a ten with another addend, and write two equations leading to the solution

Handwritten student work showing the decomposition of 9 + 5 into 10 + 4. The first equation is $9 + 5 =$ followed by a dashed box containing the digits 1 and 4. Below this, two equations are written: $9 + 1 = 10$ and $10 + 4 = 14$.