Activity 15 Assessment
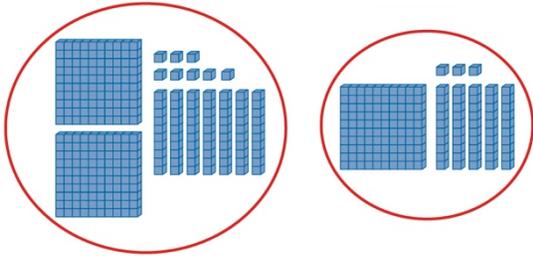## Creating and Solving Problems

Developing Meaning of Addition and Subtraction

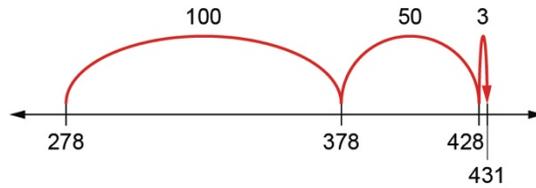| Models concretely to add and subtract	Models and symbolizes addition and subtraction	Uses standard algorithm to add and subtract

Models concretely to add and subtract

$$278 + 153 = \underline{\hspace{2cm}}$$

"278" "378, 388, 398, 408, 418, 428, 429, 430, 431"

Models and symbolizes addition and subtraction

$$278 + 153 = \underline{\hspace{2cm}}$$

100   50   3

278   378   428
                    431

"I add 5 tens and 3 ones.
78 + 53 = 78 + 50 + 3, or 131"

Uses standard algorithm to add and subtract

$$\begin{array}{r} {}^{1}2\ {}^{1}7\ 8 \\ +\ 1\ 5\ 3 \\ \hline 4\ 3\ 1 \end{array}$$

$$\begin{array}{r} {}^{2}\cancel{3}\ {}^{1}1 \\ -\ \ 4\ 2 \\ \hline 8\ 9 \end{array}$$

Observations/Documentation

Activity 15 Assessment
Creating and Solving Problems

Developing Meaning of Addition and Subtraction (con't)

Estimates sums and differences to check reasonableness $131 - 42 = 89$ "$130 - 40 = 90$, which is close to 89 so my answer is reasonable."	Creates and solves problems "There are 131 birds in the tree. Some birds flew away. Now there are 42 birds in the tree. How many birds flew away?" $131 - \square = 42$ 89 birds flew away.	Uses properties and inverse operations of addition and subtraction to solve problems $131 - \square = 42$ "I can think addition to help me solve the problem: $42 + \square = 131$"

Observations/Documentation

Activity 15 Assessment
Creating and Solving Problems

Developing Fluency for Addition and Subtraction		
Fluently adds and subtracts within 5 "I know 4 + 1 = 5 and 5 – 1 = 4."	Fluently adds and subtracts to 10 "I know 8 + 2 = 10 and 10 – 2 = 8." (complements to 10)	Fluently adds and subtracts to 20 "I can use doubles. I know 9 + 9 = 18 and 18 – 9 = 9."
Observations/Documentation		

Uses known sums and differences to solve addition and subtraction equations "25 + 37 = ▢ I know 25 + 30 = 55, and 55 plus 5 is 60, and 2 more makes 62." (decomposing, known facts)	Develops mental strategies and algorithms 29 + 32 = ▢ I take 1 from 32 and give it to 29 to get 30 + 31. 30 + 30 = 60, and 1 more is 61." (compensation)	Estimates sums and differences 49 + 38 = ▢ "49 is close to 50. 38 is close to 40. 50 + 40 = 90" (using benchmarks)
Observations/Documentation		

Mathology 3
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