Unit 2, Lesson 8

Different Ways to Decompose

Let's compare different ways to subtract.

Warm-up

Number Talk: Multiples of 10

Find the value of each expression mentally.

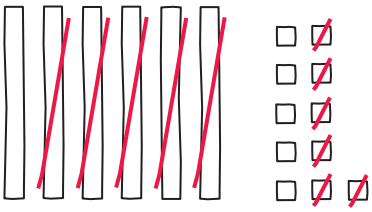
- $18 + 10 + 10$
- $18 + 20 + 10$
- $38 - 20$
- $48 - 30$

Activity 1

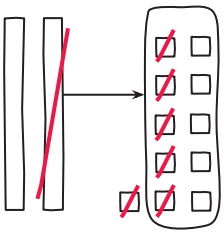
Aren't You Missing Something?

Lin and Clare make base-ten diagrams. They find the value of $71 - 56$.

Lin



Clare



1. What do you notice about their work? What do you wonder?

2. Lin and Clare write equations to show their thinking. Which group of equations matches Lin's work? Which group matches Clare's work? Explain your reasoning.

A

$71 - 50 = 21$
$21 = 10 + 11$
$11 - 6 = 5$
$10 + 5 = 15$

B

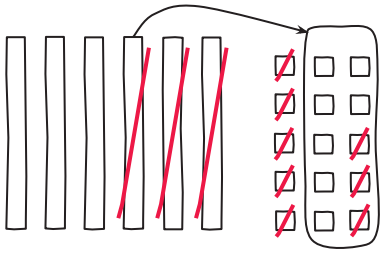
$71 = 60 + 11$
$11 - 6 = 5$
$60 - 50 = 10$
$10 + 5 = 15$

3. How are Lin's and Clare's methods alike? How are they different?

Activity 2

Different Ways to Decompose

Andre finds the value of $65 - 28$. He makes a base-ten diagram and writes equations to show his thinking.



$$65 - 28$$
$$65 - 20 = 45$$
$$45 = 30 + 15$$
$$15 - 8 = 7$$
$$30 + 7 = 37$$

1. Do you think Andre's method is more like Clare's or Lin's method? Explain your reasoning.

2. Find the value of each difference. Show your thinking using drawings, numbers, or words.

   a. $34 - 18$

   b. $82 - 37$

   c. $71 - 53$