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.

- $18 + 10 + 10$

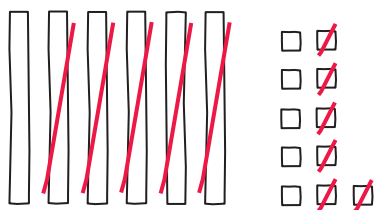- $18 + 20 + 10$

- $38 - 20$
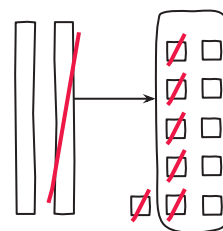
- $48 - 30$

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

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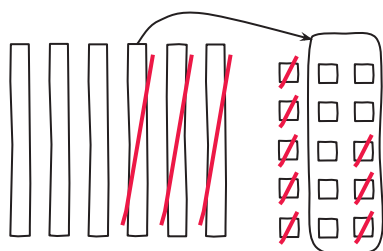$10 + 5 = 15$

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?

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. $71 - 53$