

# TYPICAL ADDITION AND SUBTRACTION STRATEGIES

## Direct Modeling

Fingers, counters, base-10 blocks, ten-frames

- Every number in the problem is represented by physical objects.

**Example:**  $18 + 14 = \underline{\quad}$ : Makes a set of 18 counters. Makes a second set of 14 counters. Re-counts all counters "1, 2, 3, ..., 30, 31, 32."

## Counting Strategies

Counting on, counting back, use of fingers

- Parts of the problem will still be modeled but all numbers no longer need to be represented by physical objects.

**Example:**  $18 + 14 = \underline{\quad}$ : Makes 14 tick marks. Says "18 (pause), 19, 20, 21, ..., 30, 31, 32" counting each of the 14 tick marks.

## Derived Fact Strategies

Doubles, use of 10-facts

**Example:**  $18 + 14 = \underline{\quad}$ : "18 + 2 is 20, plus 10 more is 30, plus 2 more is 32. So it's 32."

## Grouping Strategies

Combine 10s and 1s, group friendly numbers

**Example:**  $18 + 14 = \underline{\quad}$ : "10 + 10 is 20 and 8 + 4 is 12. So 20 + 10 is 30 and 2 more is 32. So it's 32."

## Other Strategies

Incremental, compensation

**Example:**  $18 + 14 = \underline{\quad}$ : "20 + 14 is 34 but since it is 18, it's 2 less. So it's 32."

## Standard Algorithm/ Recall

Invented Algorithms