

# I Have, You Need

## AN INSTRUCTIONAL ROUTINE TO BUILD PARTNERS OF 10, 100, 1000

### Play Often

#### Set expectation and rules of the game:

- Establish a target number.
- Say, "For a total of 100, I have 92, you need..."
- Give brief think time. Then cue students to respond, "8".
- Play several rounds at a time, gradually choosing more challenging numbers.
- Alternate between choral response, popcorn response, down the line response, and partner play. Keep it moving, keep students anticipating with positive energy. After playing a few times, talk strategy.

### Talk Strategy

#### Ask students:

*How do you know? What do you think about as you figure out each partner?*

Occasionally choose a number like 73, then immediately choose its additive partner, 27, for the next round. Ask students if they notice a relationship between the two numbers. Help students realize they could find the difference up to 100, but also subtract back from 100.

When using the target 100, do students deal with the ones first? Do students deal with the tens first? Over time, gradually help students develop the 90-10 strategy, where they fill in the total to 90 and then the ones to 10.

### Purposefully Choose Numbers to Help Students Grow

#### When choosing numbers for the "I Have" part, consider these principles:

- Choose accessible increments before choosing more challenging relationships—ie. work with multiples of 10 before moving to multiples of 5, use multiples of 10 and 5 before using whole numbers, use whole numbers before using rational numbers (fractions and decimals).
- Choose numbers in the top half of the range before using numbers in the bottom half of the range.
- Choose numbers closer to an anchor or benchmark number before using numbers that are more adrift from the anchors.

Diligently work to adjust to your students. If the problems seem easy, gradually give harder numbers. If they seem difficult, back up to easier numbers. Try to just reach the zone of proximal development.

Generally, play to total of 5, then 10, then 20, then 100. By the end of 2nd grade, total 100 by 5s. By the end of 3rd grade, total 100 by 1s and total 1,000 by 100s and 10s. If your students are older, back up to what they need and build them up.

#### Kindergarten and 1st:

Play with fingers (one hand or two), five-frame cards, ten-frame cards, double ten-frame cards, or number racks, or verbal numbers. As students get used to the game, as you show the card, say the number shown and record the partner as students say it.

#### 1st and 2nd:

Play with double ten-frame cards, number racks. As students get used to the game, as you show the card, say the number shown and record the partner as students say it. Alternate between physical representations and verbally saying the numbers.

#### 3rd to 12th:

Play with dollar amounts, coin combinations, fractions and decimals for a total of 1, times for a total of 60 minutes. As they study geometry and angles, play to benchmarks like 90, 180, 360.

Would you like to teach more complex ways of thinking and reasoning? Join us on #MathStratChat!