Just In Time Quick Check

Standard of Learning (SOL) 2.5b

Strand: Computation and Estimation

Standard of Learning (SOL) 2.5b

The student will demonstrate fluency with addition and subtraction within 20.

Grade Level Skills:

- Demonstrate fluency with addition and subtraction within 20.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
  - 2.5b - Four-in-a-Row Computation (Word) / PDF Version
- VDOE Word Wall Cards: Grade 2 (Word) | (PDF)
  - Addition
  - Subtraction
  - Related Facts
- VDOE Instructional Videos for Teachers
  - Developing Early Number Sense (grades K-2)

Supporting and Prerequisite SOL: 1.7a, 1.7b, K.4a, K.4b

SOL 2.5b - Just in Time Quick Check

Note to teachers: Have students share their strategies orally or in writing in order to determine how they solved each problem.

1. 8 + 5 =

2. 16 – 9 =

3. 7 + 7 =

4. 5 + 6 =

5. 17 – 8 =

SOL 2.5b - Just in Time Quick Check Teacher Notes

Common Errors/Misconceptions and their Possible Indications

Note to teachers: Have students share their strategies orally or in writing in order to determine how they solved each problem.

1. 8 + 5 =

   Students relying on a counting on strategy for addition may start with 9 when counting on 5 (9, 10, 11, 12, 13) and arrive at a correct answer, or they may include the 8 in their count (8, 9, 10, 11, 12) and arrive at an incorrect answer. In both situations, students would benefit from exposure to other students' strategies for basic facts, as well as practice using and selecting strategies that may be more efficient. An efficient strategy for students unable to recall this sum with automaticity would be to "make 10," decomposing the 5 from 8 + 5 to arrive at 8 + 2 + 3, making 10 from 8 + 2, and then solving 10 + 3 = 13. Number routines (i.e., number talks using two dot cards) can provide opportunities for students to explore making ten and other composing/decomposing strategies that develop flexibility and fluency in working with numbers to 20.

2. 16 – 9 =

   Students may rely only on the counting back strategy, solving this by starting at 16 and counting back 9 (15, 14, 13, 12, 11, 10, 9, 8, 7) or miscounting and/or including the 16 in their count for a difference of 8. These students would benefit from practice in the use and selection of strategies that may be more efficient. An efficient strategy for this problem would be using the knowledge that 16 – 10 is 6, so 16 – 9 would be 7. Students might also use related facts and think "9 and what number make 16?" to solve this subtraction fact.

3. 7 + 7 =

   Students who count on or count all may find the sum, but they may be more likely to miscount than students who are able to apply an efficient strategy using facts with which they are fluent. An efficient strategy for this problem would be doubles. For students who have not yet developed fluency with double 7's, exposure to decomposing the seven (thinking of 7 as 5 + 2) and using the combination of those doubles (double 7 = double 5 + double 2) may be helpful. Students may also use the "make 10" strategy and think "7 + 7 = 7 + 3 + 4 = 10 + 4." Exposure to a variety of strategies and practice using those strategies helps students develop flexibility with number combinations that will be a helpful foundation for computation with larger numbers.

4. 5 + 6 =

   Students may start at 5 and count on 6 or start at 6 and count on 5 but arrive at 10 instead of 11. These students would benefit from opportunities to think about and practice other strategies using facts with which they are fluent. For example, students who are fluent with doubles for 5 or for 6 may use "near doubles" and think 5 + 6 = (5 + 5) + 1, or they may think 5 + 6 = (6 + 6) - 1. Encouraging students to try another strategy, even when they have found the correct sum, helps them discern which strategies are more efficient for certain sums and builds confidence with this thinking.

5. 17 – 8 =

   Students who count back 8 must keep track along the way and may be likely to miscount. Students might also include 17 in their count and get 10 instead of 9. These students would benefit from opportunities to participate in number routines where they are exposed to and can consider other students' strategies. One efficient strategy for this problem would be to use 17 – 7 = 10 and then take one more away (since subtracting 8 is subtracting one more than 7) to arrive at a final answer of 9. Students might also use the "near doubles" (double 8 is 16 and 17 is

one more than 16). Teachers are encouraged to record examples of strategies shared by students that other students may use as reference as they "try out" strategies with which they are less familiar.