| Task: The Baseball Cards Collection	1st Grade

John and Isaac are collecting baseball cards. They each have a collection. Use pictures and number sentences (equations) to describe the total number of cards in each boy's collection.

- John has 8 baseball cards. He receives 4 more baseball cards for his birthday. His brother gives him 3 baseball cards. How many baseball cards does John have in his collection?

- Isaac has 7 baseball cards. His sister gives him 5 more cards. Isaac finds 4 more baseball cards. How many baseball cards does Isaac have in his baseball card collection?

- John says he has more baseball cards in his collection than Isaac has in his collection. Do you agree with John? Explain why or why not. Use the symbol >, <, or = in your explanation.

Teacher Notes:

Students may choose to solve this problem using direct modeling, counting on, or with reasoning strategies. Whole class discussions should highlight how numbers can be decomposed and recombined to make groups of tens. 10 is a benchmark number that can make computation easier. This discussion will also connect using the benchmark number of 10 to aid addition to comparing two numbers based on meanings of tens and ones. When comparing the totals of 15 and 16, students should be able to identify that each 15 is 1 ten and 5 ones and 16 is one ten and six ones. Students should have access to manipulatives, such as cubes, counters, etc., to use as needed.

Common Core State Standards for Mathematical Content	Common Core State Standards for Mathematical Practice
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. 1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

Essential Understandings

- The addition of whole numbers is based on sequential counting.

- Addition equations can be used to describe situations that involve combining quantities.

Possible Solution Paths	Assessing and Advancing Questions
Direct Modeling Student counts a set of 8 cubes (or other manipulative or drawing), then a set of 4 cubes and a set of 3 cubes. Student then counts all cubes to determine a total of 15 for John. Student then continues to model with cubes to determine that Isaac has 16. John's Collection 15 cubes Isaac's Collection 16 cubes Student can determine using a one-to-one correspondence that Isaac has one more than John and states that he does not agree that John has more because 15 < 16.	Assessing Questions • What is the problem asking you to find? • What do the cubes (or other manipulatives) represent? • What type of number sentence could describe this situation and how do you know? • How do you know who has the most? Advancing Questions • How could you represent this problem on a number line? • How could I rearrange the cubes in groups of tens and how would that help me know the total? • What if John receives one more baseball card? Who will have more and how do you know?
Counting On Student begins by starting at 8, counting on 4, counting on 3 more to determine that John has 15 cards. Student then begins at 7, counts on 5 more, and then counts on 4 more to determine that Isaac has 16 cards. Student may choose to represent this on a number line:	Assessing Questions • What is the problem asking you to find? • Describe to me how a number line can be used to help you find the total. • What type of number sentence could describe this situation and how do you know? • How do you know who has the most? Advancing Questions • John started with 8 cards and Isaac started with 7 cards. How is it

John's Collection
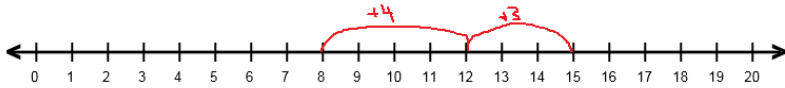
Isaac's Collection
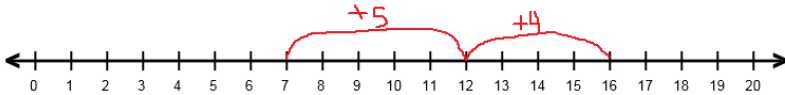
Student determines that Isaac has more than John because 16 is larger than 15. Student may also determine this by noting that 16 is one unit past 15 on a number line. Student may also note that 15 is one ten and 5 ones and 16 is one ten and 6 ones, noting that 16 has one more one than 15. Student states that he does not agree that John has more because 15 < 16.

possible that Isaac ends with more cards?
- How many more cards would each boy need to collect 20 cards each?

Reasoning Strategies

Student recognizes that cards are being joined together to make one card collection and recognizes this as an addition situation. Student uses the following equation to represent the number of cards in John's collection:

8 + 4 + 3 = ☐

Student could decompose the numbers in various ways to make the computation easier. Below are some examples:

John's Collection

Looking for Groups of Ten	Making Doubles + 1
8 + 4 + 3	8 + 4 + 3
8 + 2 + 2 + 3	8 + 7
10 + 2 + 3	1 + 7 + 7
10 + 5 = 15	1 + 14 = 15

Assessing Questions
- What is the problem asking you to find?
- Why did you choose to write an addition number sentence?
- Describe how breaking the numbers apart helped you find the total?

Advancing Questions
- John started with 8 cards and Isaac started with 7 cards. How is it possible that Isaac ends with more cards?
- How many more cards would each boy need to collect 20 cards each?
- What are other ways that the number can be broken apart to help you find the total?

Isaac's Collection

Looking for Groups of Ten 7 + 5 + 4 7+ 3 + 2 + 4 10 + 2 + 6 10 + 6 = 16	Looking for Groups of Ten 7 + 5 + 4 2 + 5 + 5 + 4 10 + 2 + 4 10 + 6 = 16

Student may note that 15 is one ten and 5 ones and 16 is one ten and 6 ones, noting that 16 is one more one than 15. Student states that he does not agree that John has more because 15 < 16.

Possible Student Misconceptions

Student incorrectly counts the number of cards.	Does your answer seem reasonable? John started with more cards than Isaac. Who received the most additional cards? Count the cards again for me, please? Let's see if we get the same count.
Student incorrectly decomposes or incorrectly recombines numbers.	Does your answer seem reasonable?

Entry/Extensions	Assessing and Advancing Questions
If students can't get started….	Write key questions that can assess and advance student thinking in this case
If students finish early….	How many more cards will each boy need to have 25 cards in his collection? If each boy gave 6 cards to a friend, how many cards would each boy have?

Discuss/Analyze

Whole Group Questions

How did you find the number of cards in each boy's collection?
Why did you choose to write an addition number sentence (equation)?
How is it possible that students choose different ways to find the answer but they all found the same answer?
How can we determine which boy has the most cards in his collection?

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