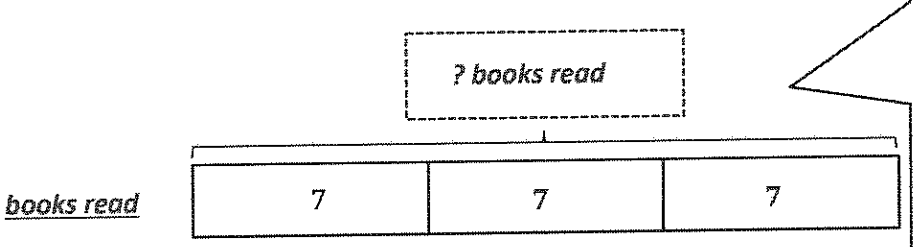
G3-M1-Lesson 21

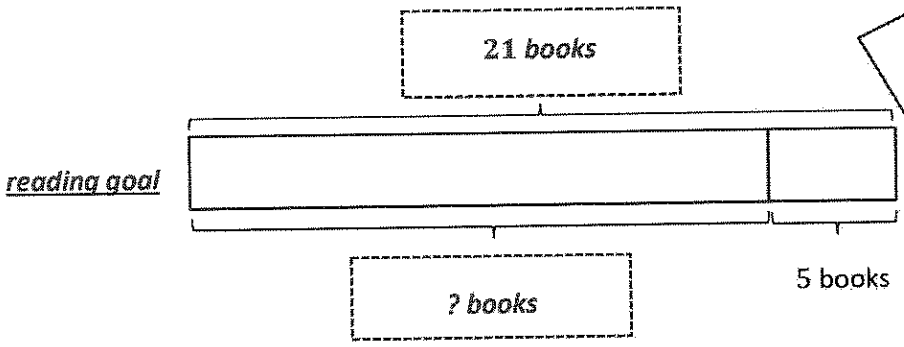
1. John has a reading goal. He checks out 3 boxes of 7 books from the library. After finishing them, he realizes that he beat his goal by 5 books! Label the tape diagrams to find John's reading goal.



Each unit in this tape diagram represents 1 box of John's library books. The number of books in each box (the size) is 7 books. So I can multiply 3×7 to find the number of books John reads.

$3 \times 7 = 21$

John reads 21 books.



I can draw a tape diagram that shows 21 as the total because John reads 21 books. I can label one part as 5 because John beat his reading goal by 5 books. When I know a total and one part, I know I can subtract to find the

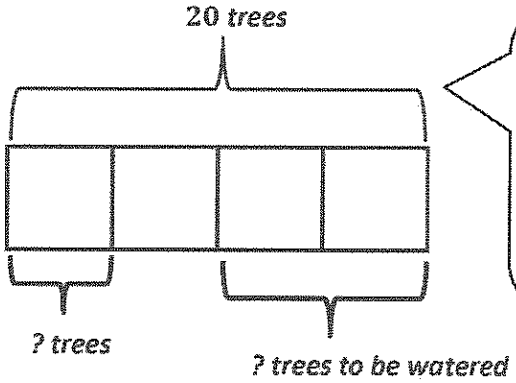
$21 - 5 = 16$

John's goal was to read 16 books.

I can check back to see if my statement answers the question.

2. Mr. Kim plants 20 trees around the neighborhood pond. He plants equal numbers of maple, pine, spruce, and birch trees. He waters the spruce and birch trees before it gets dark. How many trees does Mr. Kim still need to water? Draw and label a tape diagram.

I know Mr. Kim plants a total of 20 trees. He plants an equal number of 4 types of trees. This is the number of groups. So, the unknown is the size of each group.



I can draw a tape diagram that has 4 units to represent the 4 types of trees. I can label the whole as 20, and I can divide 20 by 4 to find the value of each unit.

I know that Mr. Kim waters the spruce and birch trees, so he still needs to water the maple and pine trees. I can see from my tape diagram that 2 units of 5 trees still need to be watered. I can multiply 2×5 to find that 10 trees still need to be watered.

$20 \div 4 = 5$

Mr. Kim plants 5 of each type of tree.

$2 \times 5 = 10$

Mr. Kim still needs to water 10 trees.

$20 - 10 = 10$

Mr. Kim still needs to water 10 trees.

Or I can subtract the number of trees watered, 10, from the total number of trees to find the answer.