Grade 6  
Unit 6Lesson 1CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

Unit 6, Lesson 1

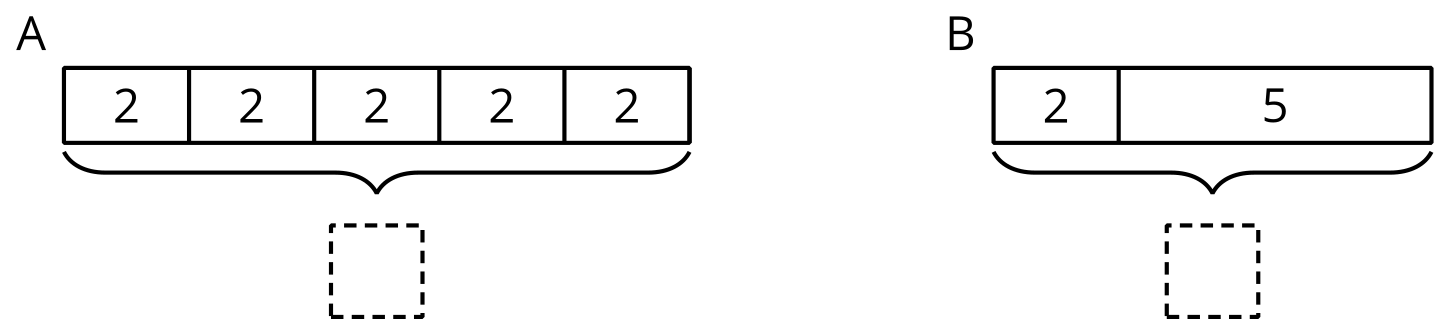
# Tape Diagrams and Equations

Let's recall how tape diagrams and equations can show relationships between amounts.

Grade 6  
Unit 6Lesson 1CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

## 1.1Which Diagram Is Which?

1. Here are two diagrams. One represents . The other represents . Which is which? Label each diagram with the value that represents the total.

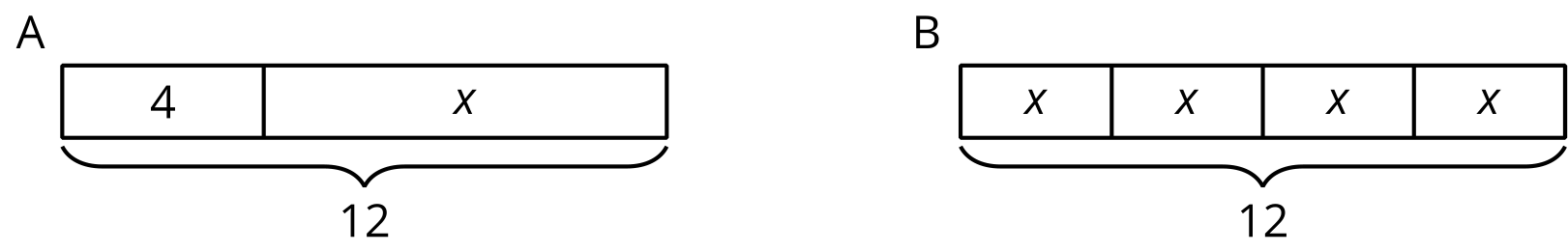
* 

1. Draw a diagram that represents each equation.

Grade 6  
Unit 6Lesson 1CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

## 1.2Match Equations and Tape Diagrams

Here are two tape diagrams. Match each equation to one of the tape diagrams.



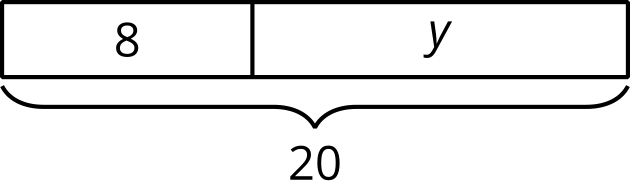
Grade 6  
Unit 6Lesson 1CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

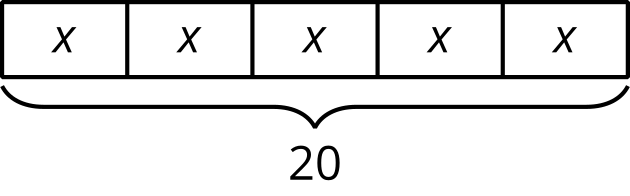
## 1.3Draw Diagrams for Equations

For each equation, draw a diagram that represents the same relationship. Then explain what the letters and represent in the relationships.

### Are you ready for more?

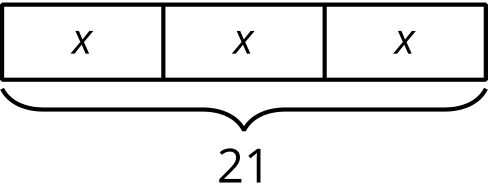
Which diagram can be represented by more equations? Explain or show your reasoning.

A

B

## Lesson 1 Summary

Tape diagrams can help us understand relationships between quantities and how operations describe those relationships.

A

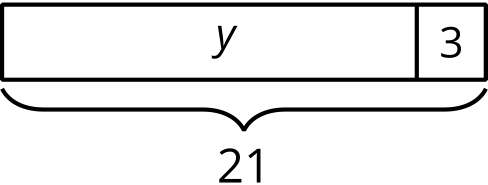
B

Diagram A has 3 parts that add to 21. Each part is labeled with the same letter, so we know the 3 parts are equal. Here are some equations that all represent Diagram A:

Notice that the number 3 is in the equations, but it's not written in the diagram. The 3 comes from counting 3 boxes representing 3 equal parts in 21.

Diagram B has 2 parts that add to 21. Here are some equations that all represent Diagram B: