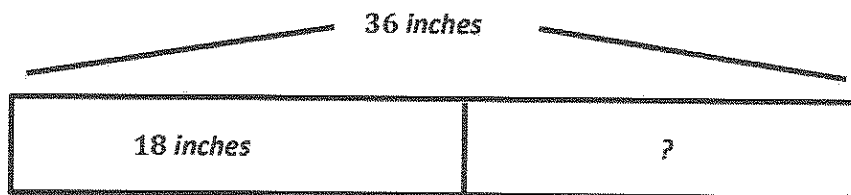


G2-M7-Lesson 20

Solve using tape diagrams. Use a symbol for the unknown.

1. Angela knitted 18 inches of a scarf. She wants her scarf to be 1 yard long. How many more inches does Angela need to knit?



$$36 - 18 = 18$$

$$18 \xrightarrow{+2} 20 \xrightarrow{+10} 30 \xrightarrow{+6} 36$$

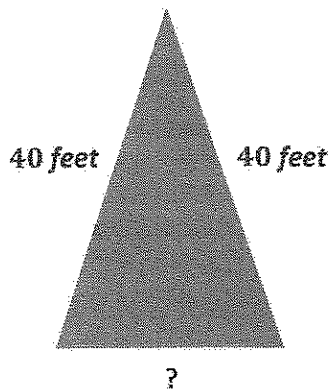
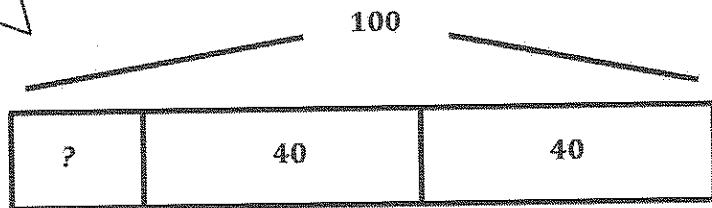
I know that a yard is 36 inches long. The scarf is one yard, so that is my whole. The part I know is the 18 inches that she already knitted.

I use the arrow way to find the missing part. I add $2 + 10 + 6 = 18$.

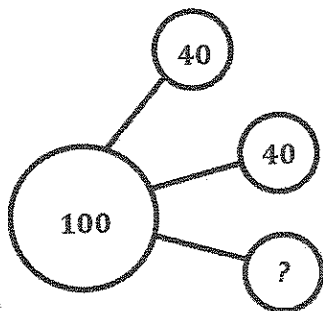
Angela needs to knit 18 more inches to finish her scarf.

2. The total length of all three sides of a triangle is 100 feet. Two sides of the triangle are the same length. One of the equal sides measures 40 feet. What is the length of the side that is not equal?

I use a three-part tape diagram because there are 3 parts in the whole.



Note: Triangle not drawn to scale.



The problem tells me that all the sides together equal 100 feet, so I know that $40 + 40 + ? = 100$. That is what I show in my tape diagram and my number bond.

$$40 + 40 + ? = 100$$

The length of the third side is 20 feet.

$40 + 40 = 80$. I think, 80 plus what number equals 100? 20. The missing part is 20.