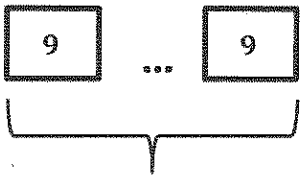
G3-M3-Lesson 15

Judy wants to give each of her friends a bag of 9 marbles. She has a total of 54 marbles. She runs to give them to her friends and gets so excited that she drops and loses 2 bags. How many total marbles does she have left to give away?



54 marbles,
n bags

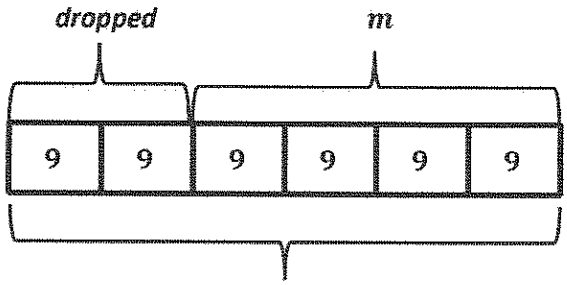
I can model the problem using a tape diagram. I know Judy has a total of 54 marbles, and each bag has 9 marbles. I don't know how many bags of marbles Judy has at first. Since I know the size of each group is 9 but I don't know the number of groups, I put a "..." in between the 2 units to show that I don't yet know how many groups, or units, to draw.

n represents the number of bags of marbles

$54 \div 9 = n$
$n = 6$

I can use the letter n to represent the unknown, which is the number of bags Judy has at first. I can find the unknown by dividing 54 by 9 to get 6 bags. But 6 bags does not answer the question, so my work on this problem is not finished.

Now I can redraw my model to show the 6 bags of marbles. I know that Judy drops and loses 2 bags. The unknown is the total number of marbles she has left to give away. I can represent this unknown with the letter m.



54 marbles, 6 bags

From my diagram, I can see that Judy has 4 bags of 9 marbles left. I can choose any of my nines strategies to help me solve 4×9. $4 \times 9 = 36$, which means there are 36 total marbles left.

m represents the total number of marbles left

$4 \times 9 = m$
$m = 36$

Judy still has 36 marbles left to give away.

I read the problem carefully and made sure to answer with the total number of marbles, not the number of bags. Putting my answer in a statement helps me check that I've answered the problem correctly.