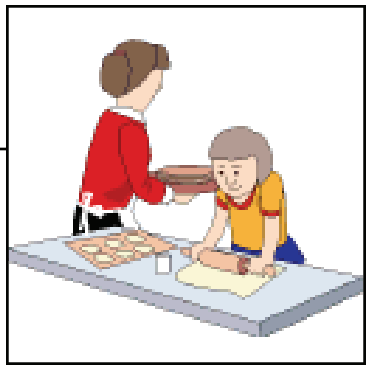
Bake Sale



Jen and Maria baked cookies together for the school bake sale. They placed all of the cookies in a large pile to cool during the night so that they could package them in the morning.

During the night, Jen woke up hungry. She went to the kitchen and ate two of the cookies that they had made. She then divided the rest of the cookies into two even piles. Jen took one pile and placed these cookies in a cookie tin which she hid in a cabinet before going back to bed.

A short time later, Maria woke up and went down to the kitchen. She ate two cookies because she was hungry, then split the remaining cookies into two equal piles. She put one pile in a plastic bag to take home for her family and hid it in her backpack before going back to bed.

In the morning, the girls were surprised to find only 10 cookies left in the pile for the bake sale. “I only ate a couple of cookies because I was hungry,” said Jen. “So did I,” said Maria. “Well, we might as well split the rest,” suggested Jen. “Okay,” said Maria, “and then we can get started baking more for the bake sale.”

- How many cookies did the girls bake for the bake sale?
- How many cookies did each girl take?
- If they split the remaining cookies fairly, did each girl get her fair share of the cookies? Explain.

Bake Sale Solution

1. Make a forward path.

Total cookies
-2
/2
x1
-2
/2
x1
10 cookies left

2. Make a backward path.

Total cookies	46
+2	46
x2	44
/1	22
+2	22
x2	20
/1	10
10 cookies left	**10**

3. Work Backward.

ANSWER:

- There were 46 cookies in the pile when the friends went to bed.
- Jen took the 2 she ate plus a pile of 22: 24 cookies
- Maria took the 2 she ate plus a pile of 10: 12 cookies
- If they split the remaining cookies fairly, they will each get 5 more so Jen will have gotten 5 + 24 or 29 cookies. Maria will have gotten 5 + 12 or 17 cookies. Since they each received different numbers of cookies, this is not a fair sharing of the total cookies.