

## Lesson 8: Working Backwards



Warm Up



Instruction



Working  
Backwards



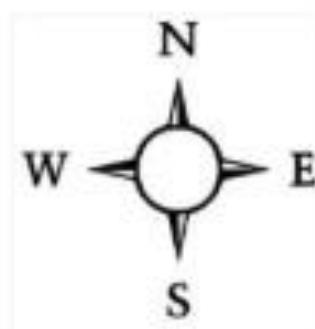
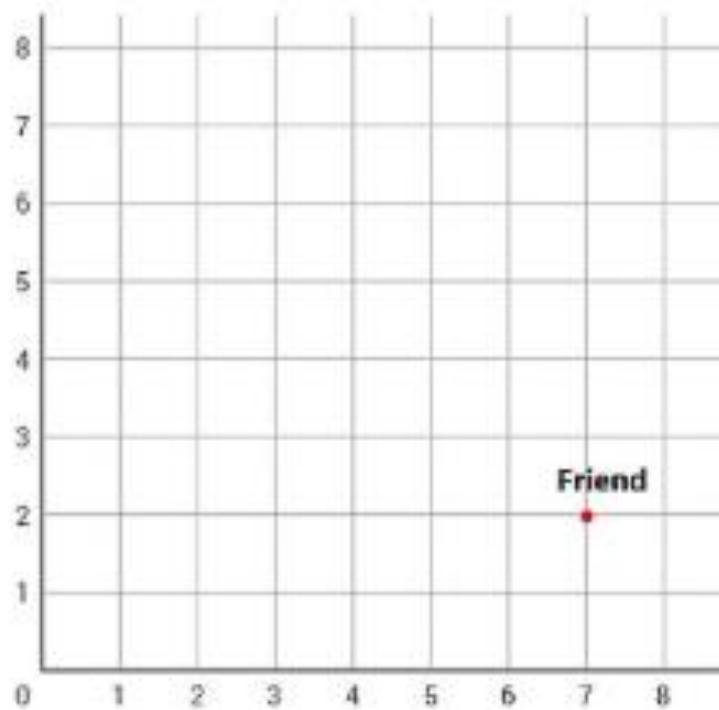
Exit Ticket



Bonus Slides

## Warm up

You left home to visit a friend. You went 3 blocks north, 1 block west, 6 blocks south, and finally 4 blocks east to get there. Where is your home?

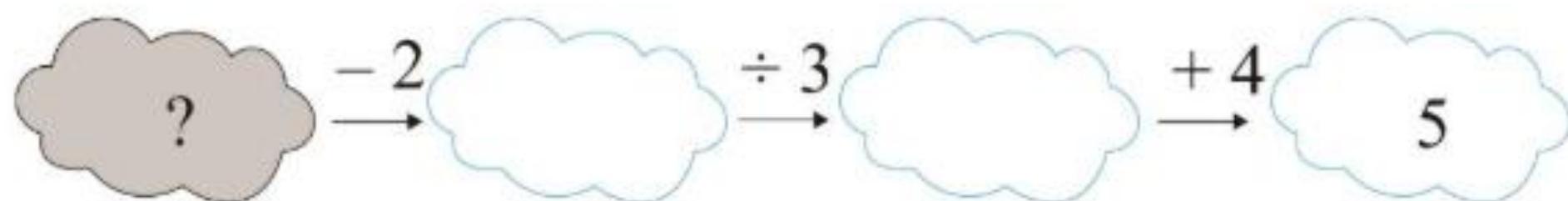


# Working Backwards

1. In a problem where there is a series of actions and the end result is known, you can use working backwards to find the initial state.
2. Sometimes use of a flow chart helps to keep track of the steps.
3. Undo the last step first. To undo going east, you need to go west; to undo adding 4, you need to subtract 4; and so on....
4. Check your answer by moving forward to see if you will get to the end result.  
Yes, students will know if their answer is correct before it is graded!

MK2007 #9

- What number needs to be written in the shaded cloud in order to get the number in the last cloud as the result of the operations shown in the picture?



MK 2014 # 10

2. There are some pieces of candy in a bowl. Sally took half of the pieces of candy. Then Tom took half of the pieces left in the bowl. After that Clara took half of the remaining pieces. In the end there were 6 pieces of candy left in the bowl. How many pieces of candy were in the bowl at the beginning?

MK 2018 # 13

3. Peta Rabbit has 20 carrots. She eats 2 carrots every day. She ate the 12<sup>th</sup> carrot on Wednesday. On which day did she start eating the carrots?

MK 2021 # 13

4. In an ice cream shop, there was some money in a drawer. After selling 6 ice cream cones, there are 70 dollars in the drawer. After selling a total of 16 ice cream cones, there are 120 dollars in the drawer. How many dollars were there in the drawer at the start?

MK 2007 # 15

5. David wrote a one-digit number, and next to it to the right he wrote another digit to form a two-digit number. Then he added 19 to this number and the sum was 72. What was the first number he wrote?

MK 2011 # 18

6. Four friends, Masha, Sasha, Dasha, and Pasha, were sitting on a bench. First Masha changed places with Dasha. Then Dasha changed places with Pasha. At the end, the girls sat on the bench in the following order from left to right: Masha, Sasha, Dasha, Pasha. In what order from left to right were they sitting in the beginning?

MK 2009 #19

7. One week, Ms. Florentina sold eggs at the market every day from Monday to Friday. On Wednesday, she sold 60 eggs. On Thursday, she sold 96 eggs, and noticed that every day that week the number of eggs she sold was equal to the sum of the number of eggs she sold the two previous days. How many eggs did Ms. Florentina sell on Monday?

## Bonus Question

In a shop, there was some money in a drawer. After selling 3 boxes of chocolates, there are 40 dollars in the drawer. After selling a total of 12 boxes of chocolates, there are 94 dollars in the drawer. How many dollars were there in the drawer at the start?