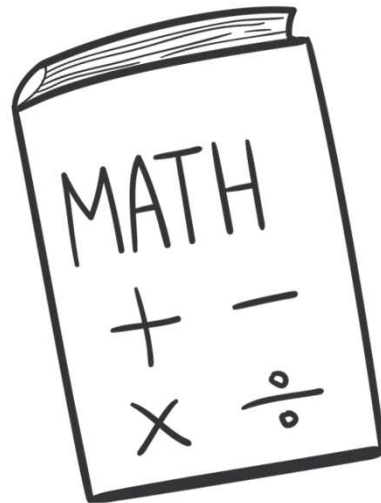


ADDITION AND SUBTRACTION

Number Line Word Problems

LESSON 7

TAKE OUT YOUR **MATH JOURNALS**



TODAY'S OBJECTIVE

Today, we will solve addition and subtraction word problems using number lines.



WATCH ME FIRST



Today we are going to solve word problems using 4 steps.

STEP 1:

Think about the word problem.

STEP 2:

Create an equation based on the problem.

STEP 3:

Solve the equation.

STEP 4:

Answer the word problem.



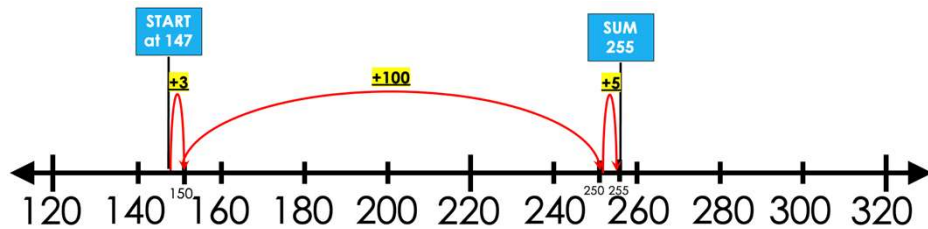
Remember...

We can use number lines to solve addition and subtraction problems.

Adding with Number Lines

When we use number lines to add, we start at the largest addend and use the smaller addend to count up to find the sum.

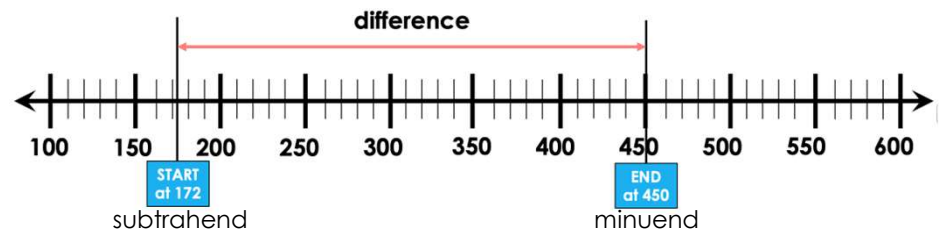
$$108 + 147 = ?$$



Subtracting with Number Lines

When we use number lines to subtract, we start at the subtrahend and count up to the minuend to find the difference.

$$450 - 172 = ? \quad \rightarrow \quad 172 + ? = 450$$





1ST: Think about the problem

Maggie took a two-day trip to New York, which was 620 total miles. The first day she drove 382 miles. How many miles did she drive the second day?



What do the numbers represent?

What is this problem asking me to find?



1ST: Think about the problem

Maggie took a two-day trip to New York, which was **620** total miles. The first day she drove **382** miles. How many miles did she drive the second day?

620

Total # of
miles driven

382

of miles
driven on Day 1



First, I need to figure out what the numbers represent.



1ST: Think about the problem

Maggie took a two-day trip to New York, which was **620** total miles. The first day she drove **382** miles. How many miles did she drive the second day?

620

Total # of miles driven

382

of miles driven on Day 1

?

of miles driven on Day 2



Now, I need to determine what am I trying to find...



2nd: Create an equation

Maggie took a two-day trip to New York, which was **620** total miles. The first day she drove **382** miles. How many miles did she drive the second day?

$$620 - 382 = ?$$

Total # of miles driven # of miles driven on Day 1 # of miles driven on Day 2



...and what equation I will use to solve.



3rd: Solve the equation: $620 - 382 = ?$

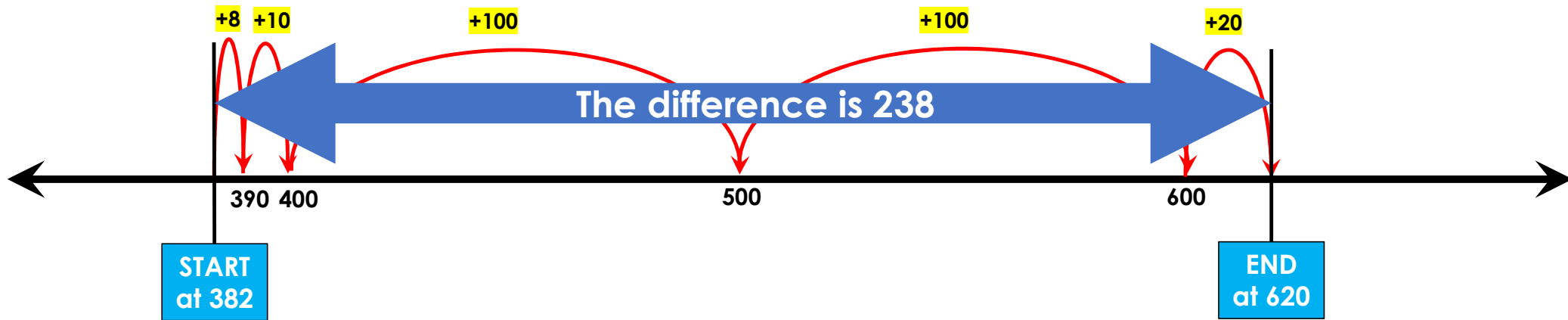


I'll count-up to solve.



$$382 + ? = 620$$

There are many ways to make jumps to solve this problem. This is just one example.



Combine Jumps to Find the Difference

$$100 + 100 + 20 + 10 + 8 = 238$$



4th: Answer the Problem

Maggie took a two-day trip to New York, which was 620 total miles. The first day she drove 382 miles. How many miles did she drive the second day?

$$\begin{array}{rcccl} 620 & - & 382 & = & 238 \\ \text{\# of miles} & & \text{\# of miles} & & \text{Total \# of} \\ \text{driven on Day 1} & & \text{driven on Day 2} & & \text{miles driven} \end{array}$$

Maggie drove 238 miles on the second day.



Finally, I'll answer the word problem.



LET'S WORK TOGETHER

1ST: Think about the problem

Ben weighs 210 pounds. His brother Robert weighs 157 pounds. What is their total weight?



What do the numbers represent?

What is this problem asking me to find?

1ST: Think about the problem

Ben weighs **210** pounds. His brother Robert weighs **157** pounds. What is their total weight?

210

of pounds
Ben weighs

157

of pounds
Robert weighs



What does 210 represent? What about 157?

1ST: Think about the problem

Ben weighs 210 pounds. His brother Robert weighs 157 pounds. What is their total weight?

210

of pounds
Ben weighs

157

of pounds
Robert weighs

?

of pounds Ben and
Robert weigh together



What are we trying to find?

2nd: Create an equation

Ben weighs 210 pounds. His brother Robert weighs 157 pounds. What is their total weight?

$$210 + 157 = ?$$

of pounds
Ben weighs

of pounds
Robert weighs

of pounds Ben and
Robert weigh together

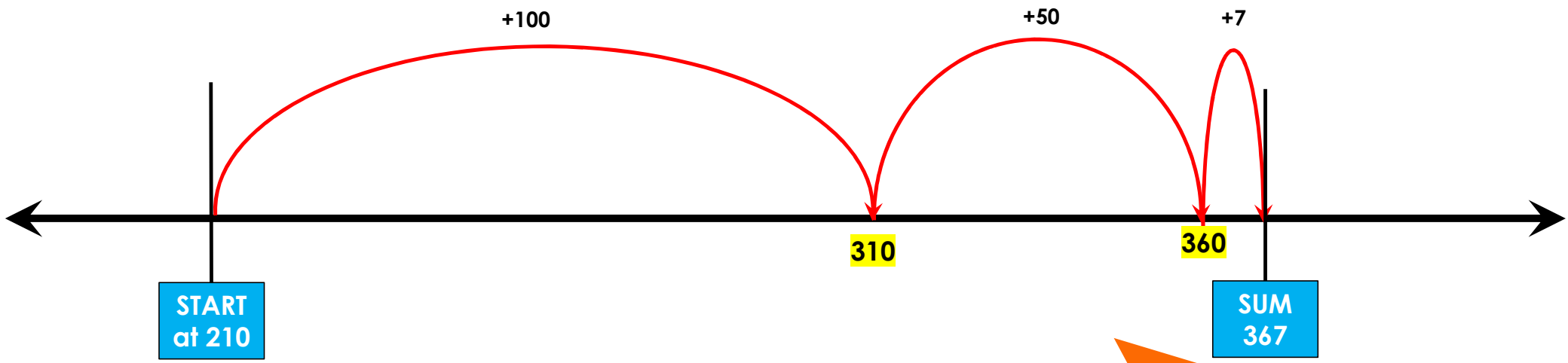


What's the equation?

 **Problem #1**
LET'S WORK TOGETHER

3rd: Solve the equation: $210 + 157 = ?$

There are many ways to decompose 157 to make jumps. This is just one example.



The sum of $210 + 157$ is 367.



4th: Answer the Problem

Ben weighs 210 pounds. His brother Robert weighs 157 pounds. What is their total weight?

$$210 + 157 = 367$$

of pounds
Ben weighs

of pounds
Robert weighs

of pounds Ben and
Robert weigh together

Ben and Robert weigh 367 pounds together.

 How should we answer the word problem?

CHECK - IN

- What did you notice?
- Can you make a connection to anything else you already know? How?
- Do you have any questions?

IT'S YOUR TURN

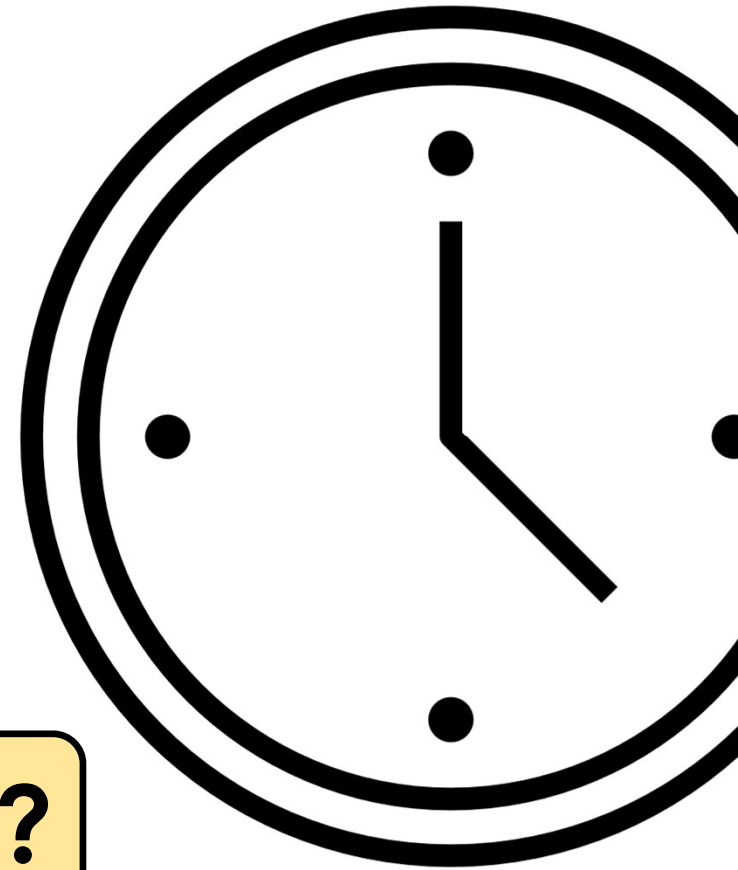


Now it's **“YOUR TURN”** to Solve



Don't forget to explain your thinking!

Time to **Discuss** and **Check** Your Answers



How did you solve?



Problem #1
YOUR TURN

Solve the word problem.

Lisa's online jewelry shop received 134 reviews in April. In May, 258 reviews were left. How many reviews did the website have in April and May?



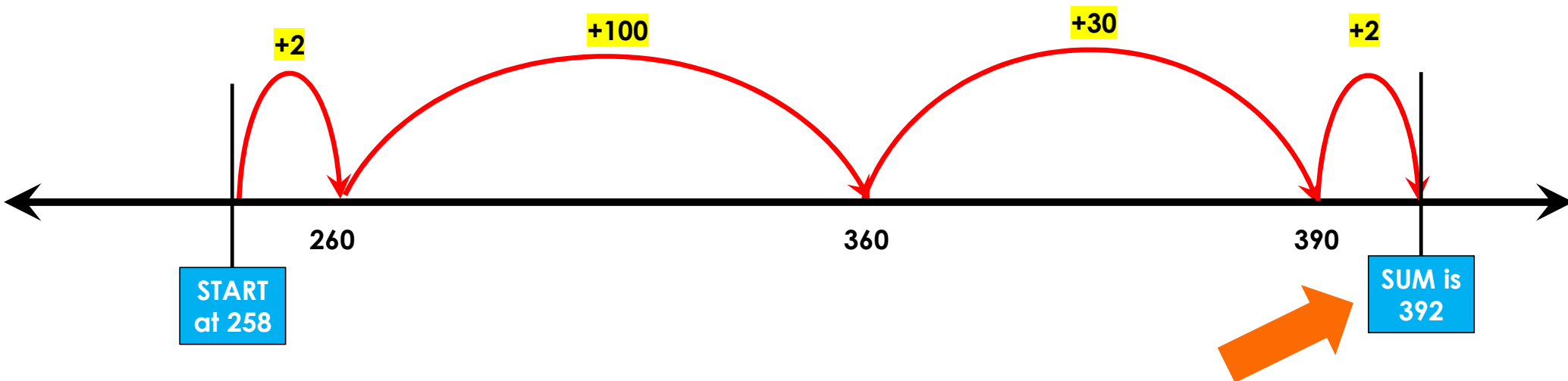
Problem #1

YOUR TURN

$$134 + 258 = 392$$

Lisa's online jewelry shop received 134 reviews in April. In May, 258 reviews were left. How many reviews did the website have in April and May?

There are many ways to decompose 134 to make jumps. This is just one example.



There were 392 website reviews in April and May.



Problem #2 YOUR TURN

Solve the word problem.

Jackie has 300 marbles. 85 of the marbles are in a jar on her desk. The rest of the marbles are in a shoebox under her bed.

How many marbles are inside the shoebox?



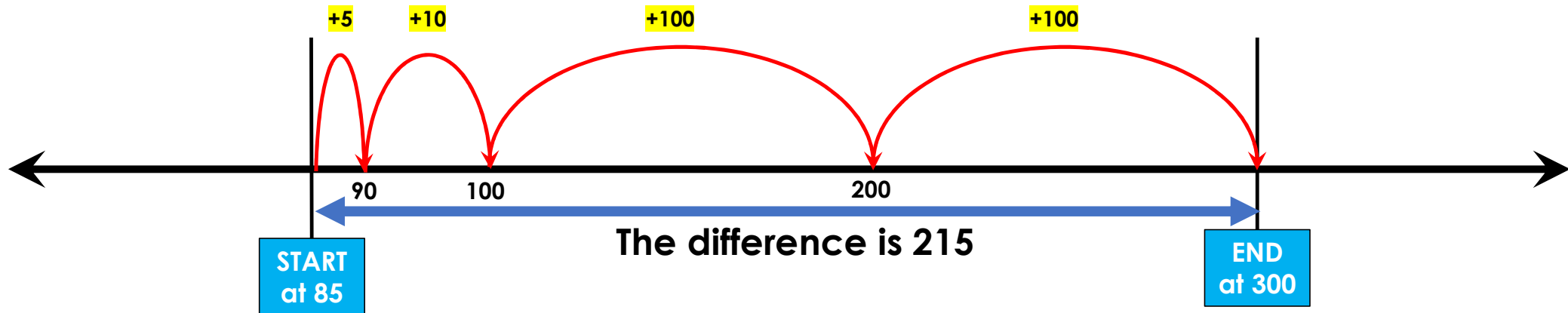
Problem #2

YOUR TURN

$$300 - 85 = 215 \quad \rightarrow \quad 85 + 215 = 300$$

Jackie has 300 marbles. 85 of the marbles are in a jar on her desk. The rest of the marbles are in a shoebox under her bed. How many marbles are inside the shoebox?

There are many ways to make jumps to solve this problem. This is just one example.



There are 215 marbles in the shoebox.



Problem #3
YOUR TURN

Solve the word problem.

Sweetie Pie Bakery made 500 pies to sell for Thanksgiving. On Monday, they baked 177 pies. They baked the rest of the pies on Tuesday. How many pies did they bake Tuesday?



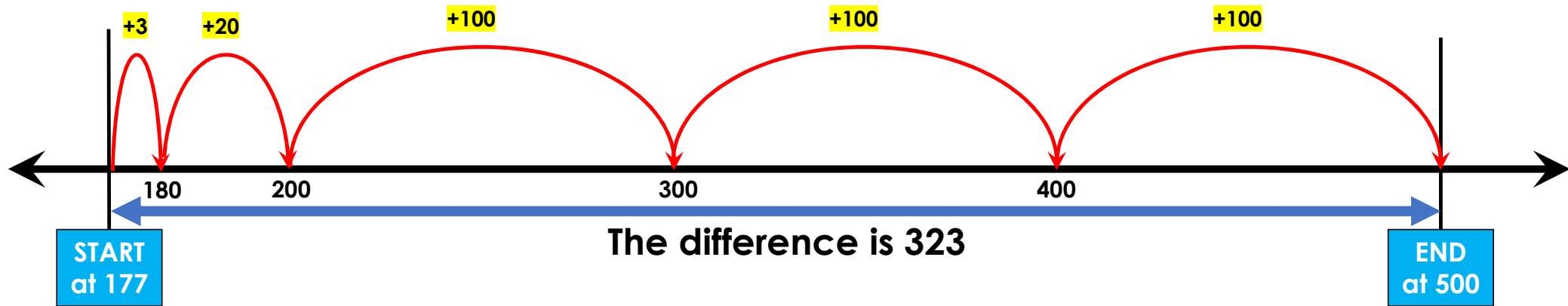
Problem #3

YOUR TURN

$$500 - 177 = 323 \quad \rightarrow \quad 177 + 323 = 500$$

Sweety Pie Bakery made 500 pies to sell for Thanksgiving. On Monday, they baked 177 pies. They baked the rest of the pies on Tuesday. How many pies did they bake Tuesday?

There are many ways to make jumps to solve this problem. This is just one example.



Sweety Pie Bakery made 323 pies on Tuesday.



Problem #4
YOUR TURN

Solve the word problem.

A farmer picked 250 Gala apples on Saturday. She picked 155 Granny Smith apples on Sunday. How many apples did she pick on Saturday and Sunday?



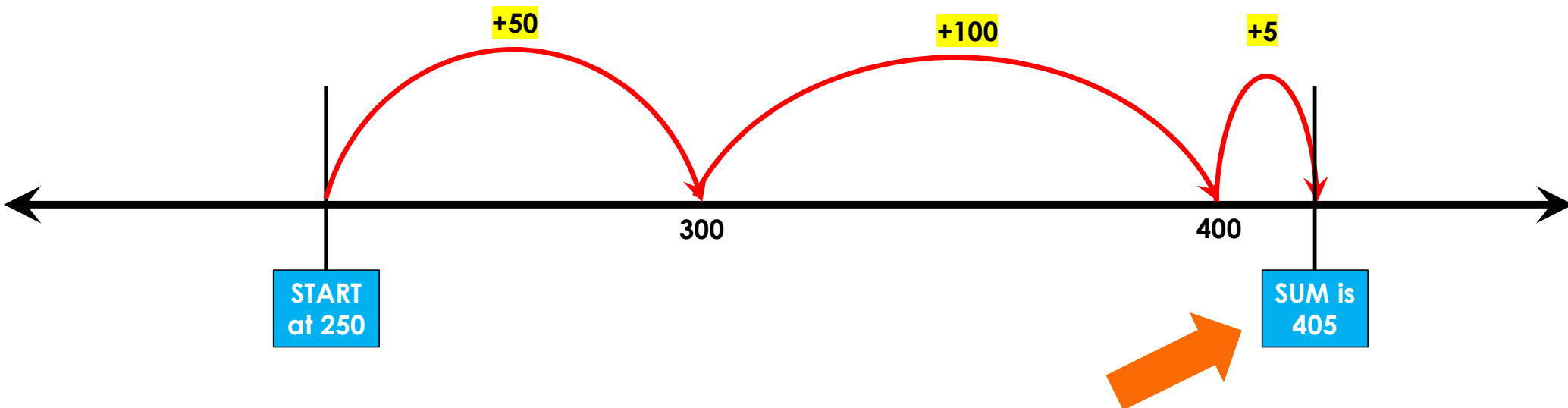
Problem #4

YOUR TURN

$$250 + 155 = 405$$

A farmer picked 250 Gala apples on Saturday. She picked 155 Granny Smith apples on Sunday. How many apples did she pick on Saturday and Sunday?

There are many ways to decompose 155 to make jumps. This is just one example.



The farmer picked 405 apples on Saturday and Sunday.



Problem #5
YOUR TURN

Solve the word problem.

While walking on a nature trail, Maria counted 360 stones. She counted 105 more stones than her sister, Isabella. How many stones did Isabella count?



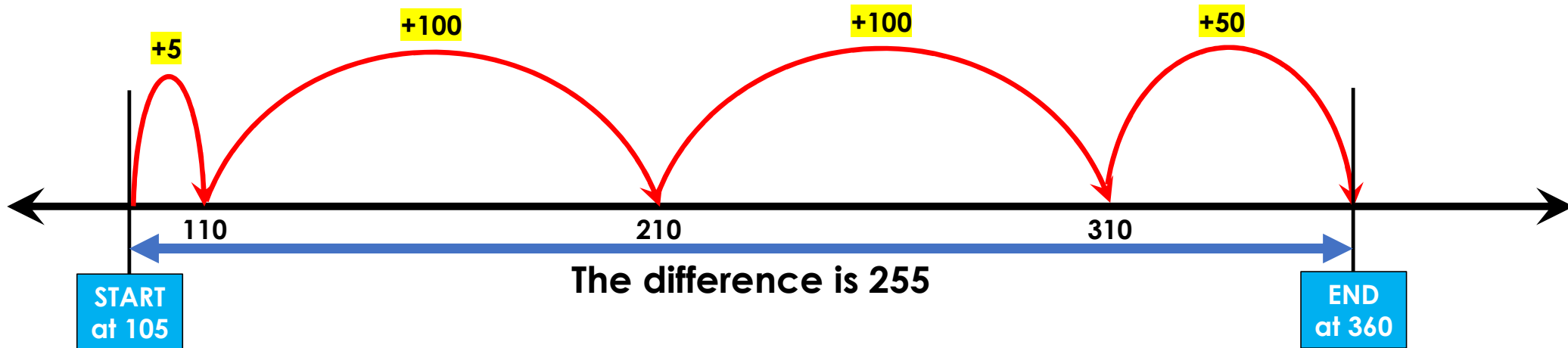
Problem #5

YOUR TURN

$$360 - 105 = 255 \quad \rightarrow \quad 105 + 255 = 360$$

While walking on a nature trail, Maria counted 360 stones. She counted 105 more stones than her sister, Isabella. How many stones did Isabella count?

There are many ways to make jumps to solve this problem. This is just one example.



Isabella counted 255 stones.



Problem #6
YOUR TURN

Solve the word problem.

Chase has 455 football cards. Hector has 139 fewer cards than Chase. How many football cards does Hector have?



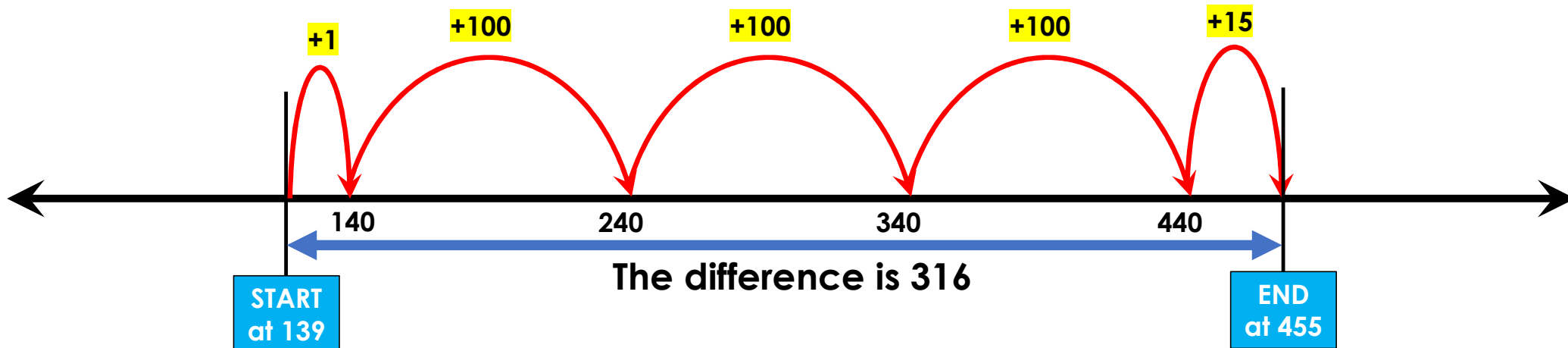
Problem #6

YOUR TURN

$$455 - 139 = 316 \rightarrow 139 + 316 = 455$$

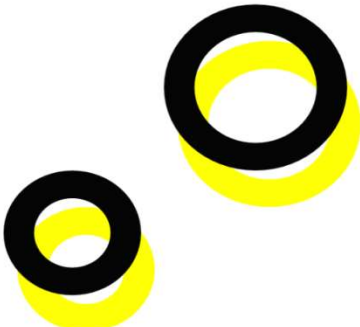
Chase has 455 football cards. Hector has 139 fewer cards than Chase.
How many football cards does Hector have?

There are many ways to make jumps to solve this problem. This is just one example.



Hector has 316 football cards.

 **Let's Reflect**



It's reflection time!