

Counting Backwards by 1s is Subtracting 1 Each Time, on a Number Line ↖



INVESTIGATIONS OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING.

INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

Subtracting 1 each time, in pairs, children select some counters, record their numbers and numbers under each counter. Children subtract 1 counter. Children cross out the counter and number under the counter. Children identify the number of counters left. Children repeatedly subtract 1 counter, crossing out the counter and number under the counter. Children identify that they are counting backwards by 1s by subtracting 1 each time, and that the number before is 1 less/fewer. **Reflection: How many are we subtracting each time when we count backwards by ones?**

- (For children who have developed their understanding that counting backwards by 1s is subtracting 1 each time) In pairs, children select a numeral card 0 - 20 and begin counting backwards from the number. Children record an open, empty number line. Children record their start number on the right end of the number line. Children repeatedly record jumps to subtract 1. Children identify that they are counting backwards by 1s by subtracting 1 each time, and that the number before is 1 less/fewer. **Reflection: How many are we subtracting each time when we count backwards by ones on a number line?**
- In pairs, children repeatedly subtract 1 on a calculator, for example, pressing 5 then - 1, then repeatedly pressing the '=' button. Children identify that repeatedly subtracting 1 means we are counting backwards. **Reflection: How many are we subtracting each time when we count backwards by ones?**

Numerals cards 0 – 19 (print, cut out and distribute as appropriate to each child)

3	7	
2	6	10
1	5	9
0	4	8

14	16	17	18
19	15	13	12
11			

Counting Backwards by 1s is Subtracting 1 Each Time, on a Number Line

Collect some counters.

Record the counters and a number under each counter, for example,



Subtract 1 counter.

Cross out the counter and the number under the counter.

How many counters left?

Subtract 1 counter.

Cross out the counter and the number under the counter.

How many counters left?

Are you counting backwards by 1s by subtracting 1 each time?

Is the number before 1 less or fewer?

Reflection: How many are we subtracting each time when we count backwards by ones?

Counting Backwards by 1s is Subtracting 1 Each Time, on a Number Line

Select a card to make a number that is neither too easy nor too challenging and start counting backwards.

Record an open empty number line.

Count backwards by 1s by subtracting 1 each time on the number line.

Are you counting backwards by 1s by subtracting 1 each time?


Is the number before 1 fewer?

Reflection: How many are we subtracting each time when we count backwards by ones on a number line?

Counting Backwards by 1s is Subtracting 1 Each Time, on a Number Line

Repeatedly subtract 1 on a calculator.

Press, for example, 5 and - 1

Repeatedly press the  button.

Are you counting backwards by 1s by subtracting 1 each time?

Is the number before 1 fewer?

Reflection: How many are we subtracting each time when we count backwards by ones?