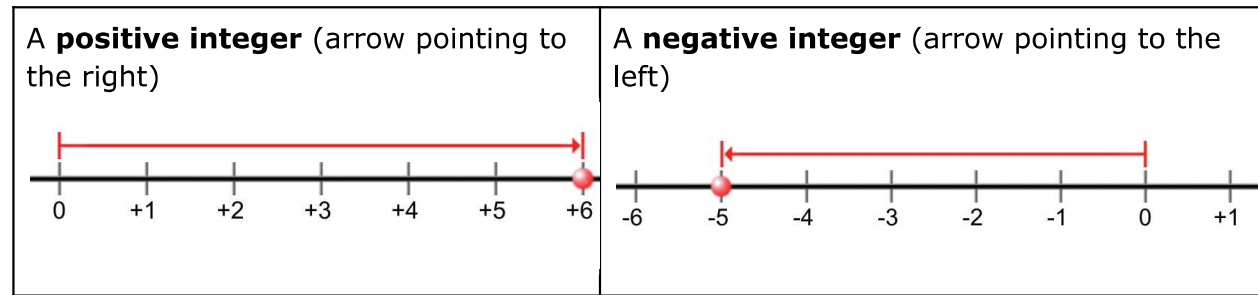


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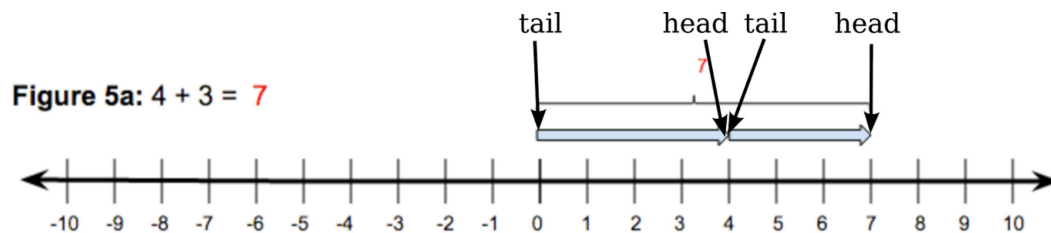
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Addition and subtraction of integers

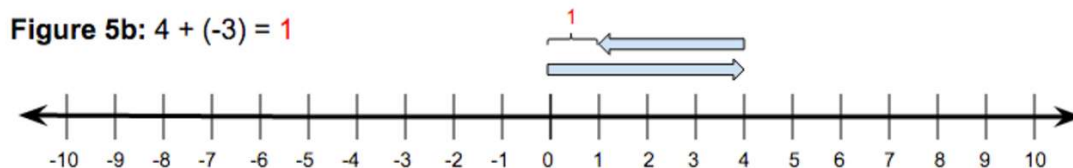


When adding integers, we just **line up their arrows head-to-tail along a number line**.

The following shows a sum of positive numbers.



The following shows a sum of a positive and a negative number. The arrows point in opposite directions, so **the answer is the difference of the lengths of the arrows**, and we find the sign by asking which arrow is longer, **the positive one or the negative one?**



1. Find the sum of +7 and -4.

2. Find the sum of -9 and +5.

3. $2+8$

4. $2+(-8)$

5. $-3 + 12$

6. $+6 - +9$

7. $-3 + -5$

8. $4 + -7$

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Block: _____

9. $8 + 0 + -7 + -8$

10. $-9 + 8$

11. $2 + -6 + -5 + 7$

12. $1 + 5 + -3 + -5$

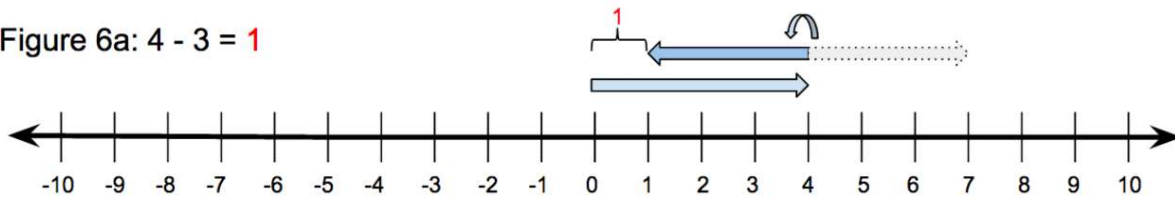
13. $-9 + 5 + -3 + 8$

14. $9 + -14 + 4 + -7$

Subtraction

Positive arrows point to the right, but **when we subtract a positive arrow, we move to the left**. We are used to this because we are used to subtracting positive numbers.

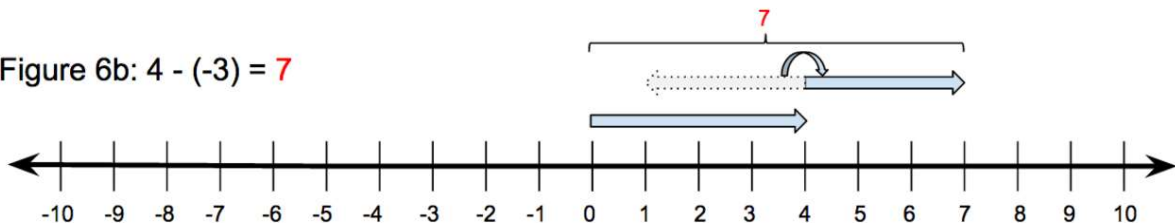
Figure 6a: $4 - 3 = 1$



Here is where things get a bit weird! Negative arrows point the left, but **when we subtract them, we also move in the direction opposite to the arrow, so when subtracting a negative, we move to the right!!** It's like we are adding a positive.

SUBTRACTING A NEGATIVE is equivalent to ADDING A POSITIVE!

Figure 6b: $4 - (-3) = 7$



15. $+3 - -6$

16. $-2 - +4$

17. $-8 - +5$

18. $(-6) - (-4)$

19. $-2 - -11$

20. $-5 - (5)$

21. $3 + 2 + 2 - (-2)$

22. $-7 + 15 + (-3)$