

EXERCISES & PROBLEMS

Communicate

1. Explain and give an example of what is meant by the opposite of a number.
2. Discuss and give examples of what is meant by the absolute value of a number.
3. Describe how to add two integers that have the same sign.
4. Describe how to add two integers that have unlike signs.
5. How would you add 25 and -13 using the ancient Chinese system? (Hint: Use colored toothpicks as counting sticks.)
6. Explain how to add -43 , -9 , and 128 in two different ways.

Practice & Apply

Find the opposite of each number.

7. 17

8. -17

9. 0

10. $(12 - 5)$

Use algebra tiles to find the following sums.

11. $-5 + (-2)$

12. $-3 + 3$

13. $2 + (-6)$

14. $-2 + (-6)$

Use a number line to find the following sums.

15. $8 + (-3)$

16. $-4 + (-5)$

17. $-1 + 5$

18. $-1 + (-2)$

Find each sum.

19. $-28 + 50$

20. $17 + (-34)$

21. $38 + (-72)$

22. $14 + (-29) + (-12)$

23. $-43 + 82 + |-19|$

24. $-308 + |-24| + (-29)$

Physics Electrons have a charge of -1 and protons have a charge of $+1$. The total charge of an atom is the sum of its electron charges and proton charges. Find the total charge of the following atoms.

25. 16 protons; 18 electrons

26. 10 protons; 10 electrons

27. The Lincoln High football team completes two series of downs with the following gains and losses. Find the total gain or loss.

Down	1	2	3	4	Down	1	2	3	4
Gain/Loss	8	-4	-3	15	Gain/Loss	-3	-5	4	-6