

Addition & Subtraction Inverses Answer Key

Part A: Compute and Observe

1. $6 + 4 - 4 = 6$

4. $7 + 8 - 8 = 7$

2. $9 - 5 + 5 = 9$

5. $15 - 9 + 9 = 15$

3. $12 + 3 - 3 = 12$

Observation: Each expression returns to its starting number. Adding and subtracting the same value cancels out — that's the inverse relationship.

Part B: Missing Number Challenge

6. The missing number is 6 $\rightarrow 10 + 6 - 6 = 10$

7. The missing number is 7 $\rightarrow 25 - 7 + 7 = 25$

8. The missing number is 5 $\rightarrow 18 + 5 - 5 = 18$

9. The missing number is 4 $\rightarrow 20 - 4 + 4 = 20$

10. The missing number is 12 $\rightarrow 33 + 12 - 12 = 33$

In every case, adding and then subtracting (or vice versa) the same number brings you back to the original amount.

Part C: Using Inverses to Solve

11. $x + 6 = 12 \rightarrow x = 12 - 6 = 6$

14. $20 = x + 15 \rightarrow x = 20 - 15 = 5$

12. $x - 7 = 9 \rightarrow x = 9 + 7 = 16$

15. $30 - x = 12 \rightarrow x = 30 - 12 = 18$

13. $8 + x = 14 \rightarrow x = 14 - 8 = 6$

Each problem shows how subtraction “undoes” addition and vice versa.

Part D: Word Problems

16. Jenna ends with 0 seashells.

17. The total score change is 0 points.

18. The submarine ends back at its starting depth (0 feet change).

19. No overall money change — you broke even.

20. The football team's total yardage change is 0 yards.