

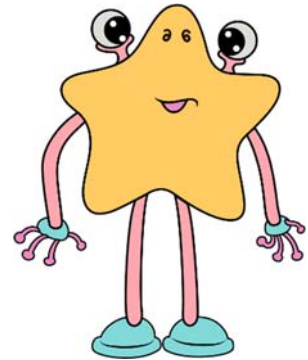
Other Inverse Operations

Part A: Identify the Inverse Operation - Write the **inverse operation** of each.

1. Multiply by $x \rightarrow$ _____
2. Take the opposite of a number $\rightarrow$ _____
3. Multiply by 3 $\rightarrow$ _____
4. Divide by 10 $\rightarrow$ _____
5. Take the reciprocal $\rightarrow$ _____

Part B: Simplify Using Inverse Properties - Simplify each expression using inverse reasoning.

6. $-(-9)$
7. $4 \times \frac{1}{4}$
8. $\frac{1}{\frac{1}{5}}$
9. $-1 \times (-8)$
10. $\frac{3}{x} \times x$



Part C: Apply Inverses to Solve - Solve for x using the appropriate inverse operation.

11. $-x = 12$
12. $\frac{1}{x} = \frac{1}{7}$
13. $\frac{2}{x} = 4$
14. $-3x = -15$
15. $\frac{x}{-5} = 9$

Part D: Function Inverses - Use the given function and its inverse to evaluate or verify results.

Let $f(x) = x + 5$ and $f^{-1}(x) = x - 5$

16. Find $f(7)$
17. Find $f^{-1}(7)$
18. Verify $f(f^{-1}(10))$
19. Verify $f^{-1}(f(8))$
20. If $f(x) = 14$, find x .