

1. 5

2. $\frac{1}{x^2 - 2x}$

3. $f(x) = \begin{cases} x^2 & \text{if } x \leq 0 \\ 3 - x & \text{if } x > 0 \end{cases}$

4. 104

5. If $f(x)$ has an inverse, then $f(f^{-1}(x)) = 1$

6. $f^{-1}(x) = \frac{1}{x} - 3$

7. \$417.77

8. 4.85

9. $\log_x z = y$

10. $x = 3$

11. 1.7129

12. 55,566,000

13. 0.7071

14. $\begin{cases} 2(a + w) = 600 \\ 3(a - w) = 600 \end{cases}$

15. $\left(\frac{12}{5}, \frac{-3}{5}\right)$