

2.13B Exponential and Logarithmic Equations and Inequalities

AP Precalculus

Name: _____

CA #2

CALCULATOR ACTIVE: Instructions: Solve each inequality.

1) $\log_2(x - 3) - 5 \geq -1$

2) $2 \cdot 3^{x-2} + 6 \leq 24$

3) $\log(6x - 10) \geq \log(3x + 11)$

4) $\log_2(x - 7) < 3$

Instructions: Find the inverse of each function.

5) $g(x) = \log(x - 5) + 8$

6) $f(x) = (5^{2x+10}) - 6$

ANSWERS

- 1) $x \geq 19$ or $(19, \infty)$
- 2) $x \leq 4$ or $(-\infty, 4]$
- 3) $x \geq 7$ or $[7, \infty)$
- 4) $7 < x < 15$ or $(7, 15)$
- 5) $g^{-1}(x) = 10^{x-8} + 5$
- 6) $f^{-1}(x) = \frac{\log_5(x+6)-10}{2}$