

Name:

Date:

Topic:

Class:

Main Ideas/Questions	Notes/Examples	
<i>Logarithmic Equations</i> TYPE I: LOG = LOG	①	CONDENSE each logarithm.
	②	Use the One-to-One Property: If $\log_b m = \log_b n$, then
	③	SOLVE and CHECK FOR EXTRANEOUS SOLUTIONS.
	1. $\log_5(5x + 9) = \log_5(6x)$	2. $\log_2(1 - 4n) = \log_2(2n + 43)$
	3. $\log_9(6 - 3w) = \log_9(-2w)$	4. $\log(y + 5) + \log 4 = \log 72$
	5. $3 \cdot \log_7 4 = \log_7(4a - 8)$	6. $\log_4 68 - \log_4 4 = \log_4(3n + 11)$
	7. $\frac{1}{2} \cdot \log_6 25 = \log_6(23 - 4w)$	8. $\log_3(2p - 5) = 2 \cdot \log_3 6 - \log_3 4$

	9. $\log_4(m^2) = \log_4(18 - 7m)$	10. $\log 2 + \log(k^2) = \log(k^2 + 16)$
TYPE 2: LOG = NUMBER	① CONDENSE and ISOLATE the logarithm.	
	② Write the equation in EXPONENTIAL FORM .	
	③ SOLVE and CHECK FOR EXTRANEIOUS SOLUTIONS .	
	11. $\log_2(x - 4) = 6$	12. $\log_3(4x + 8) - 7 = -3$
	13. $\log(2x) + \log(x - 5) = 2$	14. $2 \cdot \log x - \log 4 = 2$
	15. $\log_6(x + 9) + \log_6 x = 2$	16. $\log(x - 3) + \log x = 1$