Math 3 Act. #57 "Logarithms"

Problem 1: Solve: $\log_5(4x+11)=2$

Problem 2: Solve: $\log_2(x+5)-\log_2(2x-1)=5$

Problem 3: Solve: $\log_8 x+\log_8(x+6)=\log_8(5x+12)$

Problem 4: Solve: $\log_6 x+\log_6(x-9)=2$

Problem 5: Solve: $\ln(6x-5)=3$

Problem 6: Solve: $\log_4(3x-2)-\log_4(4x+1)=2$

Problem 7: Solve: $\log_3(x^2-6x)=3$

Problem 8: Solve: $\log(x-2)-\log(2x-3)=\log 2$

<u>Solve each logarithmic equation:</u>

9. $\log_3(4-x)=\log_3(x+8)$

10. $\log_2(2x+1)=\log_2(15)$

11. $\log_3(x+2)=\log_3(3x-5)$

12. $\log_4(x+2)=\log_4(55)$

13. $\log_5(x+1)=\log_5(2x+7)$

14. $\log_7(x+3)=\log_7(5x-8)$

15. $\log_2(x+5)=-1$

16. $\log_2(2+3x)=0$

17. $\log_4(17x-4)=3$

18. $\log_3(x-2)=3$

19. $\log_2(2x+1)=4$

20. $\log_4(x-1)=-2$