Solve each equation for $x$. Remember to condense to a single logarithm first! Are any solutions extraneous?

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\log (2 x)+\log (x-5)=2
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\log _{4}(x+12)-\log _{4} x=3
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\log _{2} x+\log _{2}(x+2)-\log _{2}(2 x)=3
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\log (5 x)+\log (x-1)=2
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\ln (x+3)+\ln x=1
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\log _{3}(x-9)+\log _{3}(x-3)=2
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