VD 3.4.2

Solve the following equations

1. $(e^{-x}-1)x+2e^{-x}=2$	x = -2 or x = 0
2. $xe^{-x}-2xe^{x}=0$	$x=0$ or $x=-\frac{1}{2}\ln 2$
3. $\ln(x-3)+\ln(x+3)=1$	$x=\sqrt{9+e}$
4. $\log_2(x+4)+\log_4 x=\log_2(x+12)$	$x=4$
5. $\log_9(x^2-1)-\log_3(x+1)=-\frac{3}{2}$	$x=\frac{14}{13}$
6. $23=\frac{50}{1+4e^{-3x}}$	$x=\frac{1}{3}\ln\left(\frac{92}{27}\right)$
7. $2=\frac{1-4e^{-x}}{1+4e^{x}}$	no solution
8. $5e^{x}-e^{-x}=2(1-3e^{2x})$	$x=-\ln 2$