$$1. log\_{x}8∙log\_{0.5}\frac{x}{2}=log\_{9}\frac{1}{27}=log\_{3^{2}}3^{-3}=\frac{\left(-3\right)}{2}=-\frac{3}{2} $$

$$log\_{x}2^{3}∙log\_{\left(2\right)^{-1}}\frac{x}{2}=3log\_{x}2∙\frac{1}{\left(-1\right)}log\_{2}\frac{x}{2}=-3log\_{x}2∙log\_{2}\frac{x}{2}=\frac{-3log\_{2}\frac{x}{2}}{log\_{2}x}$$

$$\frac{-3log\_{2}\frac{x}{2}}{log\_{2}x}=-\frac{3}{2} \frac{log\_{2}\frac{x}{2}}{log\_{2}x}=\frac{1}{2} log\_{2}\frac{x}{2}=\frac{1}{2} log\_{2}x \frac{x}{2}=x^{0.5} x^{2}=4x $$

$$ x\left(x-4\right)=0 x\ne 0;x=4 $$

$ $

$$ $$