(۹) $\log_{12}^{4} = \frac{\log_{2}^{4}}{\log_{2}^{12}} = \frac{1+\log_{2}^{3}}{2+\log_{2}^{3}} = \frac{1+1/4}{2+1/4} = \frac{5/4}{9/4} = \frac{5}{9}$ ✓ (۲)

(۱۰) $x=-1 \rightarrow a\log^{2} - 4 + b\log 2 = 0 \rightarrow (a+b)\log 2 = a$ (۲)

$\rightarrow \log 2 = \frac{a}{a+b} \rightarrow \log_{2}^{10} = \frac{a+b}{a} \rightarrow 1+\log_{2}^{5} = 1+\frac{b}{a}$

$\rightarrow \log_{2}^{5} = \frac{b}{a} \rightarrow (\sqrt{2})^{\frac{b}{a}} = \sqrt{2}^{\log_{2}^{5}} = 5^{\log_{2}^{\sqrt{2}}} = 5^{\frac{1}{2}} = \sqrt{5}$ ✓