



$$a) \log(r-x) - \log \frac{1}{(x-r)^r} = p \rightarrow \log(r-x) - y (r-x)^{-r} = c \quad \begin{matrix} \log^{r-n} = c \\ \log x = -1 \end{matrix}$$

$$\log^{(-n)} \sqrt{r} = p \quad \log \frac{1}{\sqrt{r}} = \log r^{\frac{1}{2}} = \frac{1}{2} \log r = \frac{1}{2} \log r^2 = \frac{1}{2} \log 4 = \frac{1}{2} \log 2^2 = \frac{1}{2} \cdot 2 \log 2 = \log 2 = 1$$

$$v) r^{x^r-n} = 11^x \rightarrow c^{x^r-r} = c^x \Rightarrow x^r - rx = r \quad (x-r)^r - r = r \rightarrow (x-r)^r = 4 \rightarrow x-r = \pm\sqrt{4}$$

$$\log_4(x-r) = 1 \quad \log_4(x-r) \xrightarrow{x-\sqrt{4}+r} \log_4(x+\sqrt{4}-r) = \frac{1}{2}$$

$$x = r - \sqrt{4} < r \quad \text{and} \quad x = r + \sqrt{4}$$

$$w) \log_c^r = \frac{\Delta}{\Lambda} \quad \log_{11}^4 = p \rightarrow \frac{\log_{11}^4 c}{\log_{11}^4 11} = \frac{c \log_c^r}{r \log_c^r + \log_c^r} \Rightarrow \frac{\frac{10}{\Lambda}}{\frac{14 + \Delta}{\Lambda}} = \frac{\Delta}{\sqrt{\Delta}}$$

$$a) \log_c^r = 0.11 \quad \log_{11}^4 = p \rightarrow \frac{1}{r} \log_c^r = 0.11 \rightarrow \log_c^r = 1.14$$

$$\log_{11}^4 \rightarrow \frac{\log_{11}^4 c}{\log_{11}^4 11} = \frac{\log_{11}^4 c + \log_{11}^4 11}{r \log_{11}^4 c + \log_{11}^4 11} \Rightarrow \frac{1 + 1.14}{r + 1.14} = \frac{1.14}{1.11}$$

$$1.) (a \log r) x^r + a x + b \log r = 0 \quad \log^r(a+b) = a$$

$$(\sqrt{r})^{\frac{b}{a}} = 1 \quad \log r (1 + \frac{b}{a}) = 1 \rightarrow 1 = r \times r^{\frac{b}{a}} \Rightarrow r^{\frac{b}{a}} = \Delta \rightarrow (\sqrt{r})^{\frac{b}{a}} = r^{\frac{1}{2} \cdot \frac{b}{a}} = r^{\frac{b}{2a}} = \Delta \Rightarrow \Delta^{\frac{1}{r}} = \sqrt{\Delta}$$