

$$\begin{aligned} \sqrt{A+B} &= 1 \\ \sqrt{A+B} &= 9 \end{aligned}$$

$$\begin{aligned} \sqrt{A+B} &= 50 \\ \sqrt{A+B} &= 52 \end{aligned}$$

$$\begin{aligned} A &= 1 \\ B &= -1 \end{aligned}$$

$$3^{x-1} \rightarrow c^{-1} = \frac{1}{3}$$

سوال ۱

$$\begin{aligned} r^{x+y} &= r^x + 1 \quad r^x - 1 \rightarrow r^x + 1 \rightarrow r^x - 1 \rightarrow r^x + 1 \\ r^x &= 2 \quad x = \log_2 r^x \\ r^x &= 2 \quad x = \log_2 r^x \end{aligned}$$

سوال ۲

$$\begin{aligned} 1 \cdot \log(1-a) + 2 \cdot \log(1-a) &= 2 \cdot \log(1-a) + 3 \cdot \log(1-a) = 5 \log(1-a) = 5 \\ 1 \cdot \log(1-a) &= 1 \quad 1-a=1 \quad a=0 \\ \log_{10} \frac{-(-1)}{10} &= 2 \end{aligned}$$

سوال ۳

$$\begin{aligned} \log(a^x - 1) &= \log_2 \frac{a^x - 1}{2} \\ \log_{10} \frac{a^x - 1}{2} &= 2 \end{aligned}$$

سوال ۴

$$\begin{aligned} \log(r-a) - \log \frac{1}{(r-a)^2} &\rightarrow \log(r-a) + 2 \log(r-a) = 3 \\ \log(r-a) &= 1 \quad r-a=10 \quad a=-1 \\ \log_{10} \frac{-(-1)}{10} &= 2 \end{aligned}$$

سوال ۵