

$$\frac{4.6}{3} \quad \log_{2(2x+4)}^2 + \frac{\log_{0.5}(3-2x)}{1 + \log_2(x+2)} \geq \log_{2x+4} \left( \frac{2}{3}x + \frac{4}{3} \right)$$

:oblog

$$\boxed{-1\frac{1}{2} < x < 1\frac{1}{2}}$$

$$\boxed{-2 < x < 1\frac{1}{2}}$$

→ → → a/b > 1

$$\begin{aligned} -1\frac{1}{2} \neq x > -2 &\leftarrow 1 \neq 2x+4 > 0 \\ x > -2 &\leftarrow \frac{2}{3}x + \frac{4}{3} > 0 \\ 1\frac{1}{2} > x &\leftarrow 3-2x > 0 \\ x > -2 &\leftarrow x+2 > 0 \end{aligned}$$

$$\log_{2x+4}^2 + \frac{\log_{2^{-0.5}}(3-2x)}{\log_2 2 + \log_2(x+2)} \geq \log_{2x+4} \left( \frac{2}{3}x + \frac{4}{3} \right)$$

$$\log_{2x+4}^2 + \frac{\log_2(3-2x)}{\log_2(2x+4)} \geq \log_{2x+4} \left( \frac{2}{3}x + \frac{4}{3} \right)$$

$$\log_{2x+4}^2 - \log_{2x+4}(3-2x) \geq \log_{2x+4} \left( \frac{2}{3}x + \frac{4}{3} \right)$$

$$\log_{2x+4} \left( \frac{2}{3-2x} \right) \geq \log_{2x+4} \left( \frac{2}{3}x + \frac{4}{3} \right)$$

$$(2x+4-1) \left( \frac{2}{3-2x} - \frac{2}{3}x - \frac{4}{3} \right) \geq 0$$

$$(2x+3) \frac{6-6x+4x^2-12+8x}{3(3-2x)} \geq 0$$

$$0 \leq \frac{(2x+3)(4x^2+2x-6)}{3(3-2x)}$$

$$\frac{-1\frac{1}{2} \quad + \quad 1 \quad 1\frac{1}{2} \quad -}{-1\frac{1}{2} \quad + \quad 1 \quad 1\frac{1}{2} \quad -}$$

$$\boxed{1 \leq x < 1\frac{1}{2}}$$

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→ → → a/b > 1