Question: The solution set of the inequality

$$\log_{\cos(\pi/4)}(2x^2-5x+3)\geq 2 \text{ is} -$$

a)

$$\left[\frac{5-\sqrt{5}}{4},1\right)\cup\left(\frac{3}{2},\frac{5+\sqrt{5}}{4}\right]$$

b)

$$\left(\frac{1}{2},3\right)\cup\left(3,\frac{5}{2}\right)$$

c)

$$\left(\frac{1}{2},1\right)\cup\left(2,\frac{9}{2}\right)$$

d) None of these

Answer:

$$\left[\frac{5-\sqrt{5}}{4},1\right)\cup\left(\frac{3}{2},\frac{5+\sqrt{5}}{4}\right]$$