

2.40
3

$$\cos^2 2x - 3 \sin 2x + \frac{3}{4} > 0$$

$$1 - \sin^2 2x - 3 \sin 2x + \frac{3}{4} > 0$$

$$4 \sin^2 2x + 12 \sin 2x - 7 < 0$$

$$\sin 2x = \frac{-14}{4} \rightarrow \emptyset$$

$$\sin 2x = \frac{1}{2} \rightarrow 2x = \frac{\pi}{6} + 2\pi k$$

$$2x = \frac{5\pi}{6} + 2\pi k$$

$$x = \frac{\pi}{12} + \pi k$$

$$x = \frac{5\pi}{12} + \pi k$$

$$0 \quad \overset{+}{-} \frac{\pi}{12} \quad \overset{+}{-} \frac{5\pi}{12} \quad \overset{+}{-} \frac{13\pi}{12} \quad \overset{+}{-} \frac{17\pi}{12} \quad 2\pi$$

$$\boxed{\begin{aligned} 0 < x < \frac{\pi}{12} \\ \frac{5\pi}{12} < x < \frac{13\pi}{12} \\ \frac{17\pi}{12} < x < 2\pi \end{aligned}}$$