

三角関数の合成3

数Ⅱ(三角関数の合成③)

〰 $0 \leq x < 2\pi$ のとき、次の不等式を解こう。

① $\sin x - \sqrt{3} \cos x > -1$

② $\sqrt{3} \sin x - \cos x \leq \sqrt{2}$

数Ⅱ(三角関数の合成③)

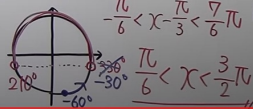
〰 $0 \leq x < 2\pi$ のとき、次の不等式を解こう。

① $\sin x - \sqrt{3} \cos x > -1$

$2 \sin(x - \frac{\pi}{3}) > -1$

$\sin(x - \frac{\pi}{3}) > -\frac{1}{2}$

$-\frac{\pi}{3} \leq x - \frac{\pi}{3} < \frac{5\pi}{3}$



$-\frac{\pi}{6} < x - \frac{\pi}{3} < \frac{7\pi}{6}$

$\frac{\pi}{6} < x < \frac{3\pi}{2}$

② $\sqrt{3} \sin x - \cos x \leq \sqrt{2}$

$2 \sin(x - \frac{\pi}{6}) \leq \sqrt{2}$

$\sin(x - \frac{\pi}{6}) \leq \frac{1}{\sqrt{2}}$

$-\frac{\pi}{6} \leq x - \frac{\pi}{6} < \frac{11\pi}{6}$

$-\frac{\pi}{6} \leq x - \frac{\pi}{6} \leq \frac{\pi}{4}$

$\frac{3\pi}{4} \leq x - \frac{\pi}{6} < \frac{11\pi}{6}$

$0 \leq x \leq \frac{5\pi}{10}, \frac{11\pi}{10} \leq x < 2\pi$

