

三角関数を含む方程式、不等式4

数Ⅱ(三角関数を含む方程式・不等式④)

〰 $0 \leq \theta < 2\pi$ のとき、次の不等式を解こう。

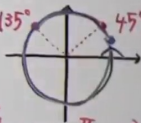
① $\sin(\theta + \frac{\pi}{6}) \geq \frac{1}{\sqrt{2}}$ ② $\cos(\theta - \frac{\pi}{6}) \geq \frac{1}{2}$ ③ $\tan(\theta + \frac{\pi}{4}) > \sqrt{3}$

数Ⅱ(三角関数を含む方程式・不等式④)

〰 $0 \leq \theta < 2\pi$ のとき、次の不等式を解こう。

① $\sin(\theta + \frac{\pi}{6}) \geq \frac{1}{\sqrt{2}}$

$\frac{\pi}{6} \leq \theta + \frac{\pi}{6} < \frac{13}{6}\pi$
 $(\frac{3}{4}\pi) 135^\circ \quad 45^\circ (\frac{\pi}{4})$

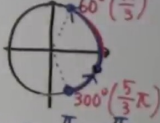


$\frac{\pi}{4} \leq \theta + \frac{\pi}{6} \leq \frac{3}{4}\pi$

$\frac{\pi}{12} \leq \theta \leq \frac{7}{12}\pi$

② $\cos(\theta - \frac{\pi}{6}) \geq \frac{1}{2}$

$-\frac{\pi}{6} \leq \theta - \frac{\pi}{6} < \frac{11}{6}\pi$
 $60^\circ (\frac{\pi}{3})$

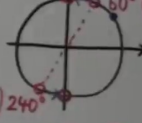


$-\frac{\pi}{6} \leq \theta - \frac{\pi}{6} \leq \frac{\pi}{3}$
 $\frac{5}{3}\pi \leq \theta - \frac{\pi}{6} < \frac{11}{6}\pi$

$0 \leq \theta \leq \frac{\pi}{2}, \frac{11}{6}\pi \leq \theta < 2\pi$

③ $\tan(\theta + \frac{\pi}{4}) > \sqrt{3}$

$\frac{\pi}{4} \leq \theta + \frac{\pi}{4} < \frac{9}{4}\pi$
 $60^\circ (\frac{\pi}{3})$



$\frac{\pi}{3} < \theta + \frac{\pi}{4} < \frac{\pi}{2} \rightarrow \frac{\pi}{12} < \theta < \frac{\pi}{4}$
 $\frac{4}{3}\pi < \theta + \frac{\pi}{4} < \frac{3}{2}\pi \rightarrow \frac{13}{12}\pi < \theta < \frac{5}{4}\pi$