三角関数の合成2

数Ⅱ（三角関数の合成②）

$0 \leqq x < 2\pi$ のとき、次の方程式を解こう。

① $\sqrt{3}\sin x - \cos x = \sqrt{3}$　　② $2(\sin x + \cos x) = -\sqrt{6}$

数Ⅱ（三角関数の合成②）

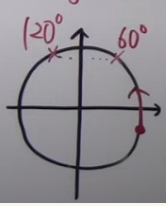
$0 \leqq x < 2\pi$ のとき、次の方程式を解こう。

① $\sqrt{3}\sin x - \cos x = \sqrt{3}$

$2\sin\left(x - \frac{\pi}{6}\right) = \sqrt{3}$

$\sin\left(x - \frac{\pi}{6}\right) = \frac{\sqrt{3}}{2}$

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



$x - \frac{\pi}{6} = \frac{\pi}{3}, \frac{2}{3}\pi$

$x = \frac{\pi}{2}, \frac{5}{6}\pi$

② $2(\sin x + \cos x) = -\sqrt{6}$

$\sqrt{2}\sin\left(x + \frac{\pi}{4}\right) = -\frac{\sqrt{6}}{2}$

$\sin\left(x + \frac{\pi}{4}\right) = -\frac{\sqrt{3}}{2}$

$\frac{\pi}{4} \leqq x + \frac{\pi}{4} < \frac{9}{4}\pi$

$x + \frac{\pi}{4} = \frac{4}{3}\pi, \frac{5}{3}\pi$

$x = \frac{13}{12}\pi, \frac{17}{12}\pi$