



基本問題を確認しよう

数Ⅱ

三角関数の加法定理 (解答)

$$\textcircled{1} \sin 75^\circ = \sin(45^\circ + 30^\circ) = \sin 45^\circ \cos 30^\circ + \cos 45^\circ \sin 30^\circ = \frac{\sqrt{2}}{2} \cdot \frac{\sqrt{3}}{2} + \frac{\sqrt{2}}{2} \cdot \frac{1}{2} = \frac{\sqrt{6} + \sqrt{2}}{4}$$

$$\textcircled{2} \tan \frac{7}{12}\pi = \tan\left(\frac{\pi}{3} + \frac{\pi}{4}\right) = \frac{\tan \frac{\pi}{3} + \tan \frac{\pi}{4}}{1 - \tan \frac{\pi}{3} \tan \frac{\pi}{4}} = \frac{1 + \sqrt{3}}{1 - \sqrt{3}} = \frac{(1 + \sqrt{3})^2}{1 - 3} = -2 - \sqrt{3}$$