



基本問題を確認しよう

数Ⅱ

三角関数の相互関係

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$$\textcircled{1} \quad \tan \theta = \frac{\sin \theta}{\cos \theta} \quad \textcircled{2} \quad \cos^2 \theta + \sin^2 \theta = 1 \quad \textcircled{3} \quad 1 + \tan^2 \theta = \frac{1}{\cos^2 \theta}$$

三角関数の性質

$$\textcircled{1} \quad n \text{ が整数のとき, } \sin(\theta + 2n\pi) = \sin \theta, \cos(\theta + 2n\pi) = \cos \theta, \tan(\theta + 2n\pi) = \tan \theta$$

$$\textcircled{2} \quad \sin(-\theta) = -\sin \theta, \cos(-\theta) = \cos \theta, \tan(-\theta) = -\tan \theta$$

$$\textcircled{3} \quad \sin(\theta + \pi) = -\sin \theta, \cos(\theta + \pi) = -\cos \theta, \tan(\theta + \pi) = \tan \theta$$

$$\textcircled{4} \quad \sin\left(\theta + \frac{\pi}{2}\right) = \cos \theta, \cos\left(\theta + \frac{\pi}{2}\right) = -\sin \theta, \tan\left(\theta + \frac{\pi}{2}\right) = -\frac{1}{\tan \theta}$$

$\textcircled{1}$ θ が第3象限の角で, $\cos \theta = -\frac{2}{5}$ のとき, $\sin \theta, \tan \theta$ の値を求めなさい。

$\textcircled{2}$ $\sin \frac{8}{5}\pi$ を, $\frac{\pi}{2}$ より小さい正の角で表しなさい。