

5.9. 三角比を含む対称式、交代式 No1

$\sin\theta + \cos\theta = \frac{1}{\sqrt{3}}$ ($0^\circ \leq \theta \leq 180^\circ$)のとき、次の式の値を求めよ。

(1) $\sin\theta\cos\theta, \sin^3\theta + \cos^3\theta$

(2) $\sin\theta - \cos\theta, \tan\theta - \frac{1}{\tan\theta}$

5.9. 三角比を含む対称式、交代式 No1 解答

$$(1) \sin\theta\cos\theta = -\frac{1}{3}, \sin^3\theta + \cos^3\theta = \frac{4\sqrt{3}}{9}$$

$$(2) \sin\theta - \cos\theta = \frac{\sqrt{15}}{3}, \tan\theta - \frac{1}{\tan\theta} = -\sqrt{5}$$

5.9. 三角比を含む対称式、交代式 No2

$\sin\theta\cos\theta = \frac{1}{4}$ ($45^\circ \leq \theta \leq 90^\circ$) のとき、次の式の値を求めよ。

(1) $\sin\theta + \cos\theta, \sin^2\theta - \cos^2\theta$

(2) $\sin\theta, \cos\theta, \tan^2\theta - \frac{1}{\tan^2\theta}$

5.9. 三角比を含む対称式、交代式 No2 解答

$$(1) \sin\theta + \cos\theta = \frac{\sqrt{6}}{2}, \sin^2\theta - \cos^2\theta = \frac{\sqrt{3}}{2}$$

$$(2) \sin\theta = \frac{\sqrt{6} + \sqrt{2}}{4}, \cos\theta = \frac{\sqrt{6} - \sqrt{2}}{4}, \tan^2\theta - \frac{1}{\tan^2\theta} = 8\sqrt{3}$$