

§ 10.1 弧度法

問題 10.1.1

扇形の弧の長さは $4 \times \frac{7}{6} = \frac{14}{3}$.

問題 10.1.2

扇形の中心角の大きさは $\frac{8}{6} \text{rad} = \frac{4}{3} \text{rad}$.

問題 10.1.3

$72^\circ = \frac{72}{180} \pi \text{rad} = \frac{2\pi}{5} \text{rad}$. $-320^\circ = -\frac{320}{180} \pi \text{rad} = -\frac{16\pi}{9} \text{rad}$. $840^\circ =$

$\frac{840}{180} \pi \text{rad} = \frac{14\pi}{3} \text{rad}$.

問題 10.1.4

$\frac{7\pi}{6} \text{rad} = \frac{7}{6} \times 180^\circ = 210^\circ$. $-\frac{19\pi}{14} \text{rad} = -\frac{19}{14} \times 180^\circ = -\left(\frac{1710}{7}\right)^\circ$.

$\frac{7}{2} \text{rad} = \frac{7}{2} \times \frac{180^\circ}{\pi} = \left(\frac{630}{\pi}\right)^\circ$.

問題 10.1.5

図形の面積は $\frac{1}{2} \times 3^2 \times \frac{8\pi}{7} = \frac{36\pi}{7}$.