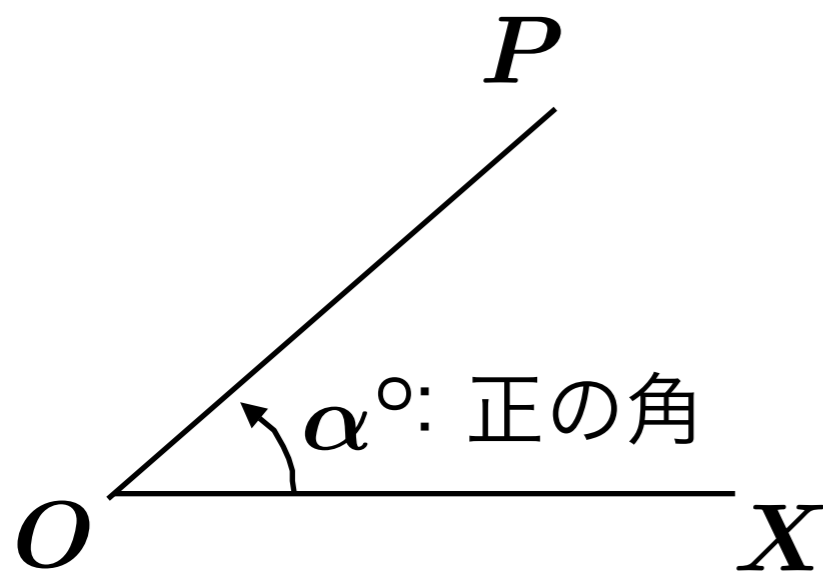


一般角と弧度法



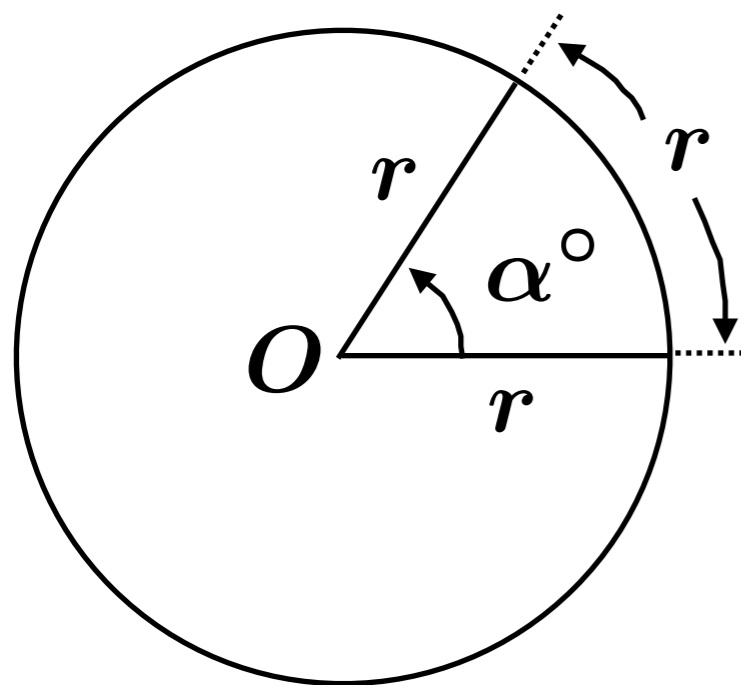
OX : 始線

OP : 動径

動径の回転が反時計回りのとき：正の角

動径の回転が時計回りのとき：負の角

α 度, α° , $\alpha[\text{deg}]$ \rightarrow 一般角 (度数法)



$$\alpha^\circ = \frac{180^\circ}{\pi} \approx 57^\circ 17' 45''$$

この角の大きさ = 1 [rad] (ラジアン)

\rightarrow 弧度法

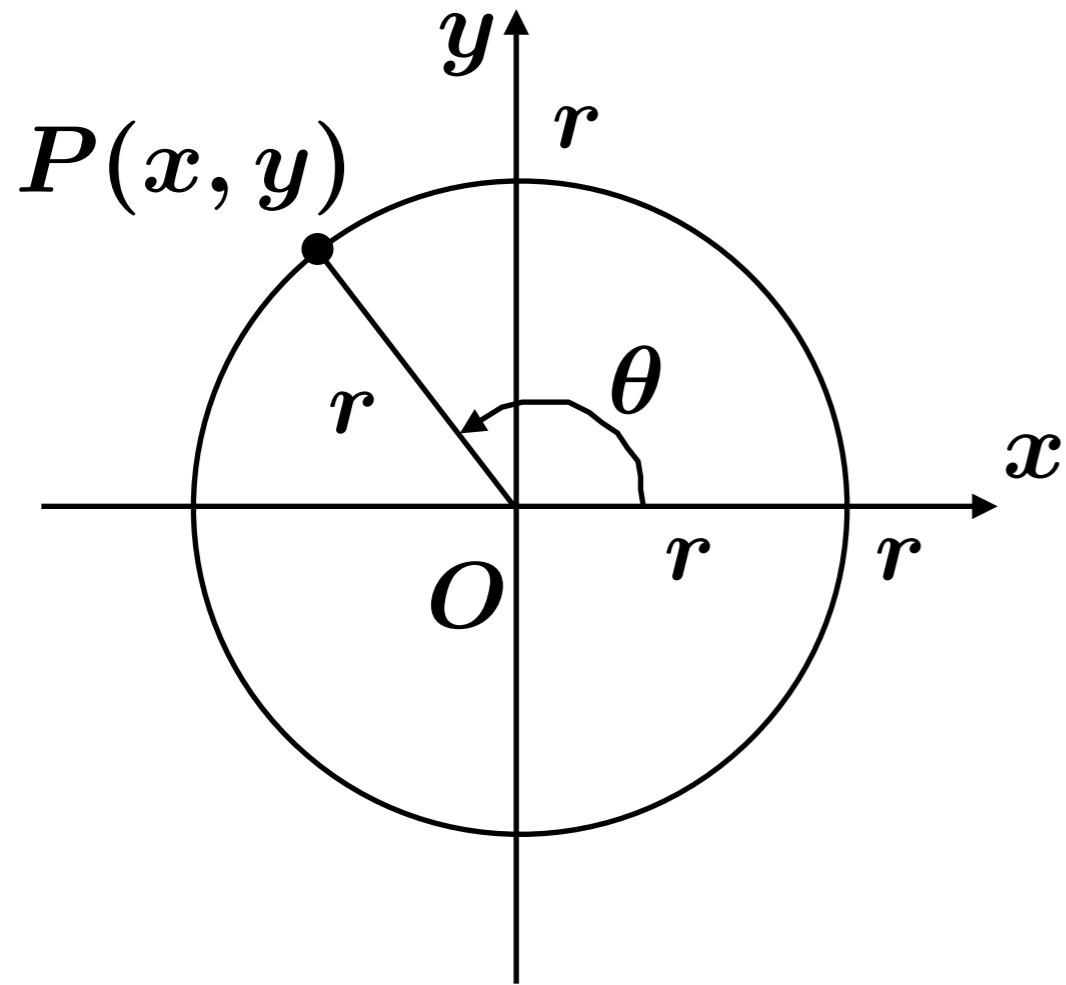
$$180^\circ = \pi \quad 1^\circ = \frac{\pi}{180}$$

$$x^\circ \text{ を } \theta[\text{rad}] \text{ に変換: } \theta = \frac{x \times \pi}{180}$$

有名角と弧度法の対応

-180°	-30°	0°	30°	45°	60°	90°
$-\pi$	$-\frac{\pi}{6}$	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
120°	135°	150°	180°	270°	360°	
$\frac{2\pi}{3}$	$\frac{3\pi}{4}$	$\frac{5\pi}{6}$	π	$\frac{3\pi}{2}$	2π	

三角関数の定義



$$\sin \theta = \frac{y}{r} : \text{正弦}$$

$$\cos \theta = \frac{x}{r} : \text{余弦}$$

$$\tan \theta = \frac{y}{x} : \text{正接}$$

$$\cot \theta = \frac{x}{y} : \text{余接}$$

$$\sec \theta = \frac{r}{x} : \text{正割}$$

$$\operatorname{cosec} \theta = \frac{r}{y} : \text{余割}$$