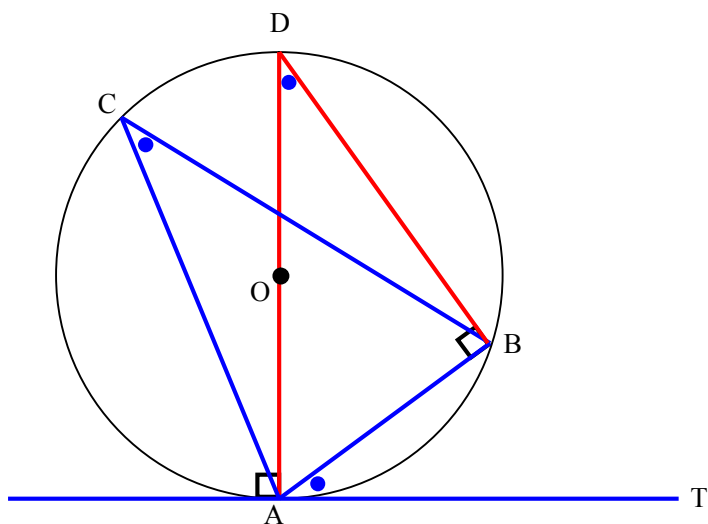


接弦定理

$$\angle BAT = \angle ACB$$



証明

円周角の定理より, $\angle ADB = \angle ACB$. . . ①

$\triangle ABD$ について

$\angle ADB + \angle DAB + \angle ABD = 180^\circ$ より, $\angle ADB = 180^\circ - \angle DAB - \angle ABD$. . . ②

$AD \perp AT$ より, $\angle DAB = 90^\circ - \angle BAT$. . . ③

$\angle ABD$ は直径 AD の円周角だから, $\angle ABD = 90^\circ$. . . ④

②に③と④を代入することにより,

$$\begin{aligned} \angle ADB &= 180^\circ - \angle DAB - \angle ABD \\ &= 180^\circ - (90^\circ - \angle BAT) - 90^\circ \\ &= \angle BAT \quad \dots \text{⑤} \end{aligned}$$

①と⑤より, $\angle BAT = \angle ACB$