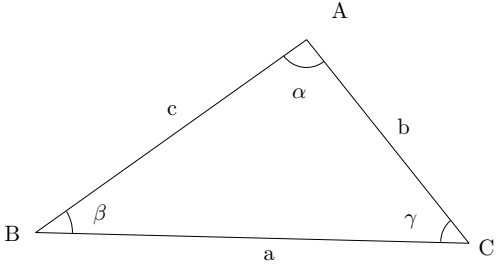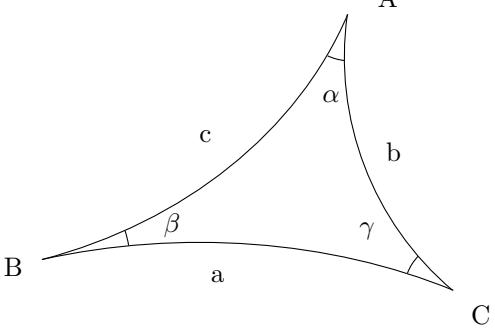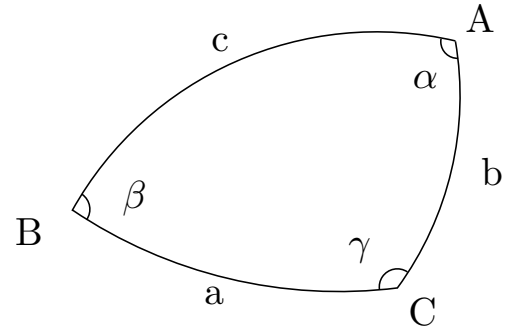# ÜÇ GEOMETRİDE BAZI FORMÜLLERİN KARŞILAŞTIRILMASI

	Öklid Geometrisi	Öklidyen Olmayan Geometri $(\text{Eğrilik} = K,\ K = -\frac{1}{R^2}\ R > 0)$	Küresel geometri $(R:\text{ kürenin yarıçapı})$
Üçgen			
Üçgenin İç Açıları Toplamı	$\alpha + \beta + \gamma = \pi$	$\alpha + \beta + \gamma < \pi$	$\alpha + \beta + \gamma > \pi$
Üçgenin Alanı	$\frac{1}{2}ah_a = \frac{1}{2}bh_b = \frac{1}{2}ch_c$	$R^2(\pi - \alpha - \beta - \gamma)$	$R^2(\alpha + \beta + \gamma - \pi)$
Üçgenin maksimum alanı	Üst sınır yok	$R^2\pi$	$R^2\pi$
Sinüs Teoremi	$\dfrac{\sin\alpha}{a} = \dfrac{\sin\beta}{b} = \dfrac{\sin\gamma}{c}$	$\dfrac{\sin\alpha}{\sinh\frac{a}{R}} = \dfrac{\sin\beta}{\sinh\frac{b}{R}} = \dfrac{\sin\gamma}{\sinh\frac{c}{R}}$ $R = 1$ iken $\dfrac{\sin\alpha}{\sinh a} = \dfrac{\sin\beta}{\sinh b} = \dfrac{\sin\gamma}{\sinh c}$	$\dfrac{\sin\alpha}{\sin\frac{a}{R}} = \dfrac{\sin\beta}{\sin\frac{b}{R}} = \dfrac{\sin\gamma}{\sin\frac{c}{R}}$ $R = 1$ iken $\dfrac{\sin\alpha}{\sin a} = \dfrac{\sin\beta}{\sin b} = \dfrac{\sin\gamma}{\sin c}$
Kosinüs Teoremi	$c^2 = a^2 + b^2 - 2ab\cos\gamma$	$\cosh\dfrac{c}{R} = \cosh\dfrac{a}{R}\cosh\dfrac{b}{R} - \sinh\dfrac{a}{R}\sinh\dfrac{b}{K}\cos\gamma$ $R = 1$ iken $\cosh c = \cosh a\cosh b - \sinh a\sinh b\cos\gamma$	$\cos\dfrac{c}{R} = \cos\dfrac{a}{R}\cos b + \sin\dfrac{a}{R}\sin\dfrac{b}{R}\cos\gamma$ $R = 1$ iken $\cos c = \cos a\cos b + \sin a\sin b\cos\gamma$
$(\gamma = \frac{\pi}{2}$ iken$)$ Pisagor Teoremi	$c^2 = a^2 + b^2$	$\cosh\dfrac{c}{R} = \cosh\dfrac{a}{R}\cosh\dfrac{b}{R}$ $R = 1$ iken $\cosh c = \cosh a\cosh b$	$\cos\dfrac{c}{R} = \cos\dfrac{a}{R}\cos\dfrac{b}{R}$ $R = 1$ iken $\cos c = \cos a\cos b$
r yarıçaplı çemberin çevresi	$2\pi r$	$2\pi R\sinh\frac{r}{R}$ $R = 1$ iken $2\pi\sinh r$	$2\pi R\sin\frac{r}{R}$ $R = 1$ iken $2\pi\sin r$
r yarıçaplı dairenin alanı	πr^2	$2\pi R^2(\cosh\frac{r}{R} - 1)$ $(R = 1$ ise $2\pi(\cosh r - 1))$	$2\pi R^2(1 - \cos\frac{r}{R})$ $(R = 1$ ise $2\pi(1 - \cos r))$