$$\sin(\alpha+\beta)=\sin\alpha\cos\beta+\cos\alpha\sin\beta$$
$$\sin(\alpha-\beta)=\sin\alpha\cos\beta-\cos\alpha\sin\beta$$
$$\cos(\alpha+\beta)=\cos\alpha\cos\beta-\sin\alpha\sin\beta$$
$$\cos(\alpha-\beta)=\cos\alpha\cos\beta+\sin\alpha\sin\beta$$

$$\sin 2x=2\sin x\cdot\cos x$$
$$\cos 2x=\cos^2 x-\sin^2 x$$

$$\left|\sin\frac{x}{2}\right|=\sqrt{\frac{1-\cos x}{2}} \qquad \left|\cos\frac{x}{2}\right|=\sqrt{\frac{1+\cos x}{2}}$$

$$\sin x+\sin y=2\sin\frac{x+y}{2}\cdot\cos\frac{x-y}{2}$$
$$\sin x-\sin y=2\cos\frac{x+y}{2}\cdot\sin\frac{x-y}{2}$$
$$\cos x+\cos y=2\cos\frac{x+y}{2}\cdot\cos\frac{x-y}{2}$$
$$\cos x-\cos y=-2\sin\frac{x+y}{2}\cdot\sin\frac{x-y}{2}$$

sin. v. (*usu*, *Ssu*): $\dfrac{a}{\sin\alpha}=\dfrac{b}{\sin\beta}=\dfrac{c}{\sin\gamma}=2r$

kos. v. (*sss*, *sus*): $a^2=b^2+c^2-2bc\cdot\cos\alpha$

$$S=\sqrt{s(s-a)(s-b)(s-c)}=\frac{1}{2}ab\cdot\sin\gamma$$

kr. ops.: + *sin. v.* $r=\dfrac{abc}{4S}$ kruž. veps.: $\rho=\dfrac{S}{s};\ s=\dfrac{o}{2}$

α	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	π	$\frac{3}{2}\pi$	© 2007 Michal Wiglasz web: gringo.profitux.cz	
	0°	30°	45°	60°	90°	180°	270°		
$\sin\alpha$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	0	-1	$++$ $--$	$\sin^2 x+\cos^2 x=1$ $\operatorname{tg} x\cdot\operatorname{cotg} x=1$
$\cos\alpha$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	-1	0	$-+$ $-+$	
$\operatorname{tg}\alpha$	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	–	0	–	$-+$ $+-$	
$\operatorname{cotg}\alpha$	–	$\sqrt{3}$	1	$\frac{\sqrt{3}}{3}$	0	–	0	$-+$ $+-$	