TRIGNOMETRY

	0	30	45	60	90
sin	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
cos	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
tan	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	∞
cosec	∞	2	$\sqrt{2}$	$\frac{2}{\sqrt{3}}$	1
sec	1	$\frac{2}{\sqrt{3}}$	$\sqrt{2}$	2	∞
cot	∞	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0

(1) $\sin^2\theta + \cos^2\theta = 1$

(2) $1 + \tan^2\theta = \sec^2\theta$

$\therefore \tan^2\theta - \sec^2\theta = -1$

$\therefore \sec^2\theta - \tan^2\theta = 1$

(3) $1 + \cot^2\theta = \operatorname{cosec}^2\theta$

$\therefore \operatorname{cosec}^2\theta - \cot^2\theta = 1$

(4) $\sin(90 - \theta) = \cos\theta$

$\cos(90 - \theta) = \sin\theta$

(5) $\tan(90 - \theta) = \cot\theta$

$\cot(90 - \theta) = \tan\theta$

(6) $\sec(90 - \theta) = \operatorname{cosec}\theta$

$\operatorname{cosec}(90 - \theta) = \sec\theta$