SAT PREP

Conversion of Trigonometric Ratio

	sin	cos	tan	csc	sec	cot
sin	■	$\pm\sqrt{1-\cos^2\alpha}$	$\pm\frac{\tan\alpha}{\sqrt{1+\tan^2\alpha}}$	$\frac{1}{\csc\alpha}$	$\pm\frac{\sqrt{\sec^2\alpha-1}}{\sec\alpha}$	$\pm\frac{1}{\sqrt{1+\cot^2\alpha}}$
cos	$\pm\sqrt{1-\sin^2\alpha}$	■	$\pm\frac{1}{\sqrt{1+\tan^2\alpha}}$	$\pm\frac{\sqrt{\csc^2\alpha-1}}{\csc\alpha}$	$\frac{1}{\sec\alpha}$	$\pm\frac{\cot\alpha}{\sqrt{1+\cot^2\alpha}}$
tan	$\pm\frac{\sin\alpha}{\sqrt{1-\sin^2\alpha}}$	$\pm\frac{\sqrt{1-\cos^2\alpha}}{\cos\alpha}$	■	$\pm\frac{1}{\sqrt{\csc^2\alpha-1}}$	$\pm\sqrt{\sec^2\alpha-1}$	$\frac{1}{\cot\alpha}$
csc	$\frac{1}{\sin\alpha}$	$\pm\frac{1}{\sqrt{1-\cos^2\alpha}}$	$\pm\frac{\sqrt{1+\tan^2\alpha}}{\tan\alpha}$	■	$\pm\frac{\sec\alpha}{\sqrt{\sec^2\alpha-1}}$	$\pm\sqrt{1+\cot^2\alpha}$
sec	$\pm\frac{1}{\sqrt{1-\sin^2\alpha}}$	$\frac{1}{\cos\alpha}$	$\pm\sqrt{1+\tan^2\alpha}$	$\pm\frac{\csc\alpha}{\sqrt{\csc^2\alpha-1}}$	■	$\pm\frac{\sqrt{1+\cot^2\alpha}}{\cot\alpha}$
cot	$\pm\frac{\sqrt{1-\sin^2\alpha}}{\sin\alpha}$	$\pm\frac{\cos\alpha}{\sqrt{1-\cos^2\alpha}}$	$\frac{1}{\tan\alpha}$	$\pm\sqrt{\csc^2\alpha-1}$	$\pm\frac{1}{\sqrt{\sec^2\alpha-1}}$	■