

AB CALCULUS**Trig Ratios of Special Angles****Complete the following without a calculator**

Name: _____

Period: _____ Date: _____

Give the exact ratio for each of the following trig functions: [1 point each]

$\tan\left(\frac{\pi}{3}\right) =$	$\sec(30^\circ) =$	$\tan(45^\circ) =$
$\cos(60^\circ) =$	$\sec(60^\circ) =$	$\sin\left(\frac{\pi}{4}\right) =$
$\sin(30^\circ) =$	$\cot\left(\frac{\pi}{3}\right) =$	$\cos\left(\frac{\pi}{4}\right) =$
$\csc\left(\frac{\pi}{4}\right) =$	$\tan(30^\circ) =$	$\cot(30^\circ) =$
$\sec\left(\frac{\pi}{6}\right) =$	$\tan\left(\frac{\pi}{4}\right) =$	$\sec\left(\frac{\pi}{3}\right) =$
$\cot\left(\frac{\pi}{6}\right) =$	$\cot(45^\circ) =$	$\tan\left(\frac{\pi}{6}\right) =$
$\sin\left(\frac{\pi}{6}\right) =$	$\sec(45^\circ) =$	$\sin(60^\circ) =$
$\csc(30^\circ) =$	$\csc(45^\circ) =$	$\cos\left(\frac{\pi}{3}\right) =$

$\cos\left(-\frac{3\pi}{2}\right) =$	$\cot(510^\circ) =$	$\tan\left(-\frac{17\pi}{6}\right) =$
$\sin(-240^\circ) =$	$\cos(540^\circ) =$	$\csc\left(\frac{15\pi}{4}\right) =$
$\sec\left(-\frac{19\pi}{6}\right) =$	$\cot\left(\frac{19\pi}{6}\right) =$	$\cot\left(-\frac{4\pi}{3}\right) =$
$\sin\left(-\frac{7\pi}{4}\right) =$	$\csc(225^\circ) =$	$\sec(540^\circ) =$
$\tan\left(-\frac{5\pi}{4}\right) =$	$\cos\left(-\frac{11\pi}{4}\right) =$	$\sin(-120^\circ) =$

Give the principle value ranges for each inverse function

Inverse Sine	Inverse Cosine	Inverse Tangent

Inverse Cosecant	Inverse Secant	Inverse Cotangent

Inverse of Special Angle Ratios - Give the principle value angles for each of the following

$\sin^{-1}\left(-\frac{1}{2}\right) =$	$\arccos\left(\frac{\sqrt{2}}{2}\right) =$	$\arctan(1) =$
$\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right) =$	$\operatorname{arccot}(0) =$	$\tan^{-1}(\sqrt{3}) =$
$\arccos\left(\frac{1}{2}\right) =$	$\sin^{-1}(-1) =$	$\operatorname{csc}^{-1}(-\sqrt{2}) =$
$\cot^{-1}\left(-\frac{1}{\sqrt{3}}\right) =$	$\tan^{-1}(-\sqrt{3}) =$	$\arcsin\left(-\frac{\sqrt{3}}{2}\right) =$
$\arccos\left(-\frac{\sqrt{3}}{2}\right) =$	$\sin^{-1}\left(-\frac{1}{\sqrt{2}}\right) =$	$\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right) =$
$\cos^{-1}\left(\frac{1}{\sqrt{2}}\right) =$	$\operatorname{csc}^{-1}(2) =$	$\operatorname{csc}^{-1}(-2) =$
$\sin^{-1}\left(\frac{\sqrt{3}}{2}\right) =$	$\cos^{-1}(0) =$	$\tan^{-1}(0) =$
$\operatorname{arcsec}(-2) =$	$\arccos(-1) =$	$\tan^{-1}(-1) =$