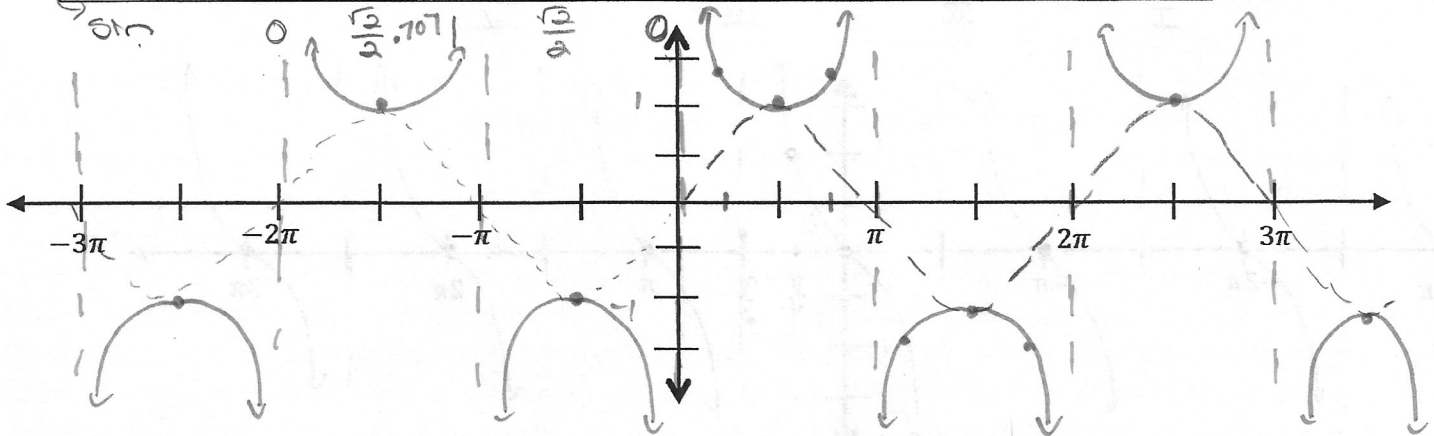


Algebra III
Graphing Other Trigonometric Functions

θ	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
$\csc \theta$	UND	$\sqrt{2}$	1	$\frac{1}{\sqrt{2}}$	UND	$-\sqrt{2}$	-1	$-\frac{1}{\sqrt{2}}$	UND



Period: 2π

x-int: NONE

Domain: \mathbb{R} except $\text{int } \pi$

y-int: NONE

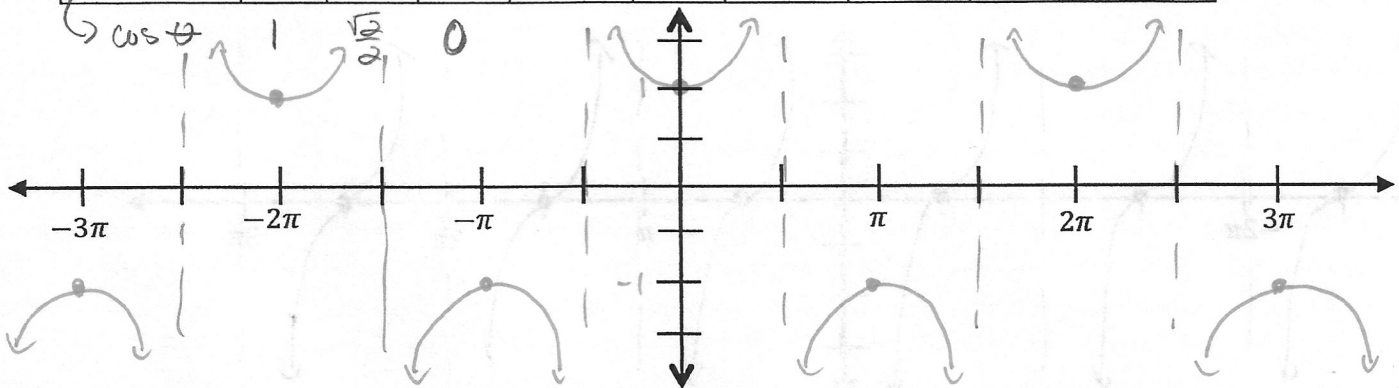
Range: $(-\infty, -1] \cup [1, \infty)$

Asymptotes: $(\csc = \text{UND})$ $\text{int } \pi$

$y = 1$: $\frac{\pi}{2} + 2\pi k$
 $\csc = 1$

$y = -1$: $-\frac{\pi}{2} + 2\pi k$
 $\csc = -1$

θ	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
$\sec \theta$	1	$\sqrt{2}$	UND	$-\sqrt{2}$	-1	$-\sqrt{2}$	UND	$\sqrt{2}$	1



Period: 2π

x-int: NONE

Domain: \mathbb{R} except $\frac{\text{odd } \pi}{2}$

y-int: (0, 1)

Range: $(-\infty, -1] \cup [1, \infty)$

Asymptotes: $(\sec = \text{UND})$ $\frac{\text{odd } \pi}{2}$

$y = 1$: even int π
 $\sec = 1$

$y = -1$: odd int π
 $\sec = -1$

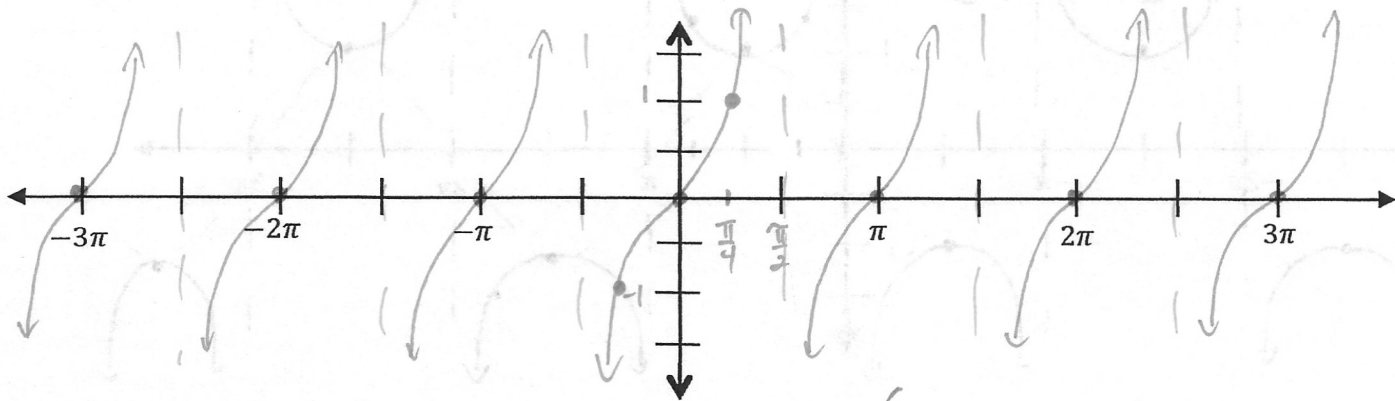
Algebra III
Graphing Other Trigonometric Functions

$(\frac{-\sqrt{2}}{2}, \frac{-\sqrt{2}}{2})$

$(1,0)$ $(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$ $(0,1)$

θ	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
$\tan \theta$	0	1	UND	-1	0	1	UND	-1	0

I II III IV



Period: π

x-int: $(\tan=0) \text{ int } \pi$

Domain: \mathbb{R} except $\frac{\text{odd } \pi}{2}$

y-int: $(0,0)$

Range: $\mathbb{R} (-\infty, \infty)$

Asymptotes: $(\tan=\text{UND}) \frac{\text{odd } \pi}{2}$

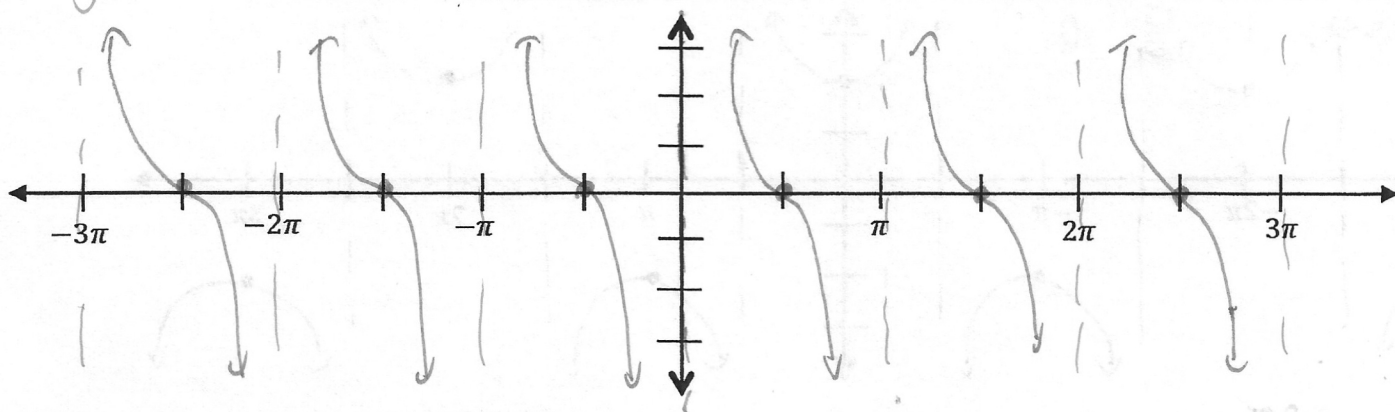
$y=1: \frac{\pi}{4} + \pi k$

$y=-1: -\frac{\pi}{4} + \pi k$

$\tan=1$

$\tan=-1$

θ	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
$\cot \theta$	UND	1	0	-1	UND	1	0	-1	UND



Period: π

x-int: $(\cot=0) \frac{\text{odd } \pi}{2}$

Domain: \mathbb{R} except $\text{int } \pi$

y-int: none

Range: $\mathbb{R} (-\infty, \infty)$

Asymptotes: $(\cot=\text{UND}) \text{ int } \pi$

$y=1: \frac{\pi}{4} + \pi k$

$y=-1: -\frac{\pi}{4} + \pi k$

$\cot=1$

$\cot=-1$