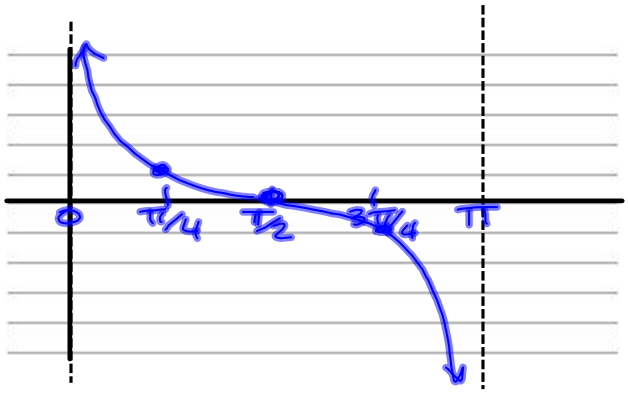
Investigating the Cotangent Function

x	$y_2=\cos x$	$y_1=\sin x$	$y=\cot x$
0	1	0	undef.
π/4	0.7	0.7	1
π/2	0	1	0
3π/4	-0.7	0.7	-1
π	-1	0	undef.
5π/4	-0.7	-0.7	1
3π/2	0	-1	0
7π/4	0.7	-0.7	-1
2π	1	0	undef.

one phase of $y=\cot x$



$y=\cot x=\frac{\cos x}{\sin x}$

$\cot x=\frac{1}{\tan x}$

Dom: $(0,\pi)$

Range: $(-\infty,\infty)$

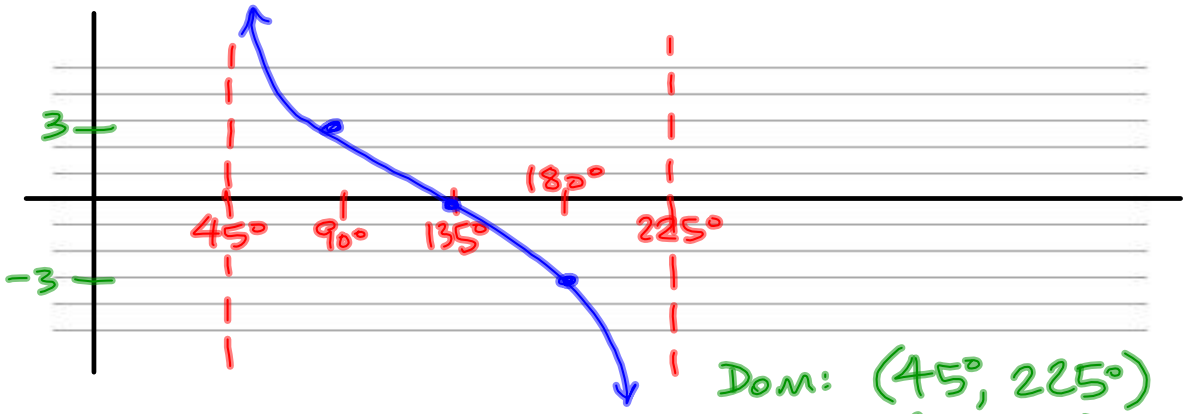
Graphing Cotangent

Graph 1 period and state the domain and range of that period.

$y=3\cot(\theta-45°)$

$\theta-45°=0°$ $\quad\theta=45°$

$\theta-45°=180°$ $\quad\theta=225°$



Dom: $(45°, 225°)$

RAN: $(-\infty,\infty)$