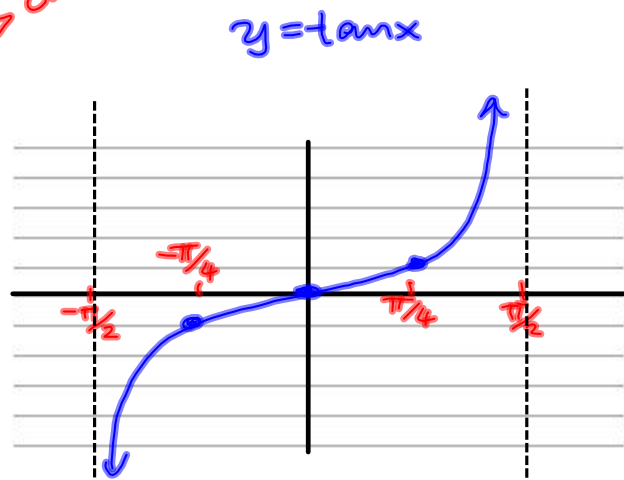


Investigating the Tangent Function

x	y ₁ =sinx	y ₂ =cosx	y=tanx
$-\pi/2$	-1	0	undef.
$-\pi/4$	-0.7	0.7	-1
0	0	1	0
$\pi/4$	0.7	0.7	1
$\pi/2$	1	0	undef.
$3\pi/4$	0.7	-0.7	-1
π	0	-1	0
$5\pi/4$	-0.7	-0.7	1
$3\pi/2$	-1	0	undef.

one phase



Dom: $(-\pi/2, \pi/2)$

$$\tan x = \frac{\sin x}{\cos x}$$

Graphing Tangent

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

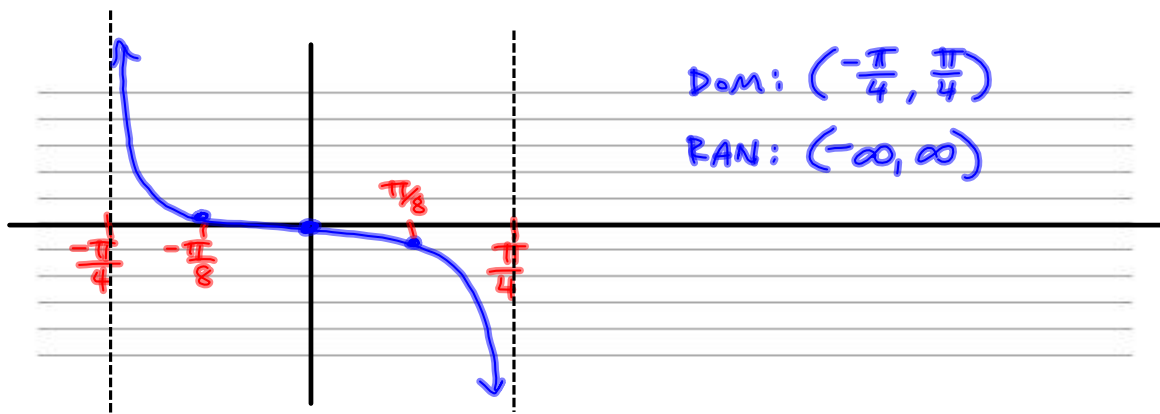
$$y = -\frac{1}{2} \tan(2x)$$

$$2x = -\frac{\pi}{2}$$

$$x = -\frac{\pi}{4}$$

$$2x = \frac{\pi}{2}$$

$$x = \frac{\pi}{4}$$



Dom: $(-\frac{\pi}{4}, \frac{\pi}{4})$

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