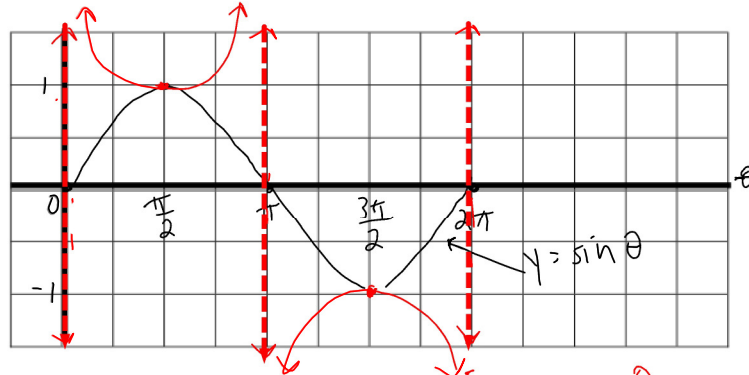


Graphing Reciprocal Trigonometric Functions

1) Graph $y = \csc \theta$ for $0 \leq \theta \leq 2\pi$

reciprocal of $y = \sin \theta$
 $\frac{1}{0}$
 $\frac{1}{0}$



Points when $y = 1$ and $y = -1$
 reciprocal of
 1 is 1
 -1 is -1
 0 is undefd

Determine the following for all values of $y = \csc \theta$:

a) Domain

$$\theta \neq k\pi, k \in \mathbb{Z}$$

b) Range

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

c) θ -intercept(s)

none

d) y-intercept(s)

none

e) ~~Amplitude~~

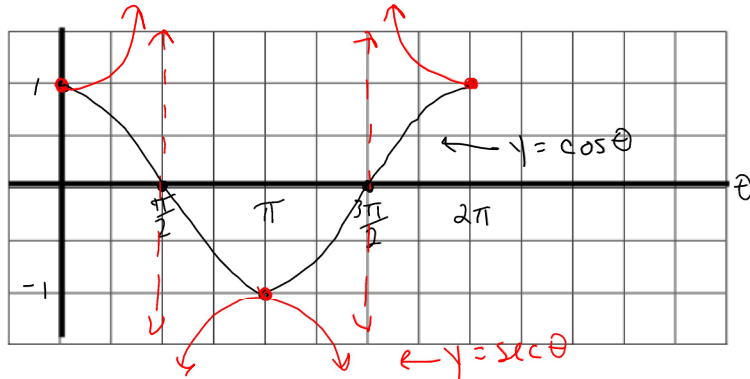
Asymptotes
 $\theta = k\pi, k \in \mathbb{Z}$

f) Period

$$2\pi$$

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2) Graph $y = \sec \theta$ for $0 \leq \theta \leq 2\pi$



Determine the following for all values of $y = \sec \theta$:

a) Domain

$$\theta \neq \frac{\pi}{2} + k\pi, k \in \mathbb{Z}$$

b) Range

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

d) ~~x~~-intercept(s)

none

c) Asymptotes

$$\theta = \frac{\pi}{2} + k\pi, k \in \mathbb{Z}$$

d) y-intercept(s)

1

~~e) Amplitude~~

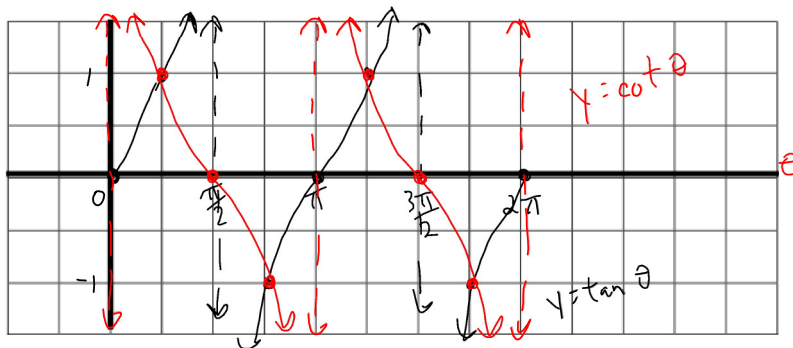
~~N/A~~

f) Period

2π

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3) Graph $y = \cot \theta$ for $0 \leq \theta \leq 2\pi$



zeroes change
to asymptotes
and
vice
versa

$y = 1$ and
 $y = -1$
are
invariant
pts

Determine the following for all values of $y = \cot \theta$:

a) Domain

$$\theta \neq k\pi, k \in \mathbb{Z}$$

b) Range

$$(-\infty, \infty)$$

c) Asymptotes

$$\theta = k\pi, k \in \mathbb{Z}$$

d) θ -intercept(s)

$$\theta = \frac{\pi}{2} + k\pi, k \in \mathbb{Z}$$

e) y -intercept(s)

none

f) Period

$$\pi$$