4.4 Trigonometric Functions of Any Angle (Day 2)

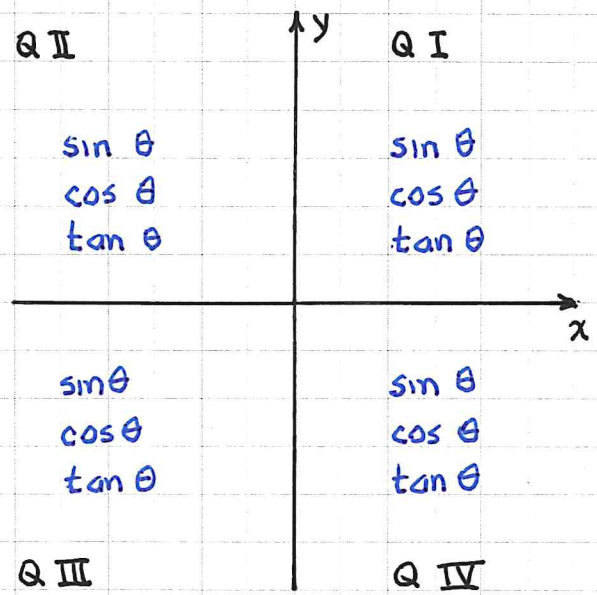
Ex. ① Determine the sign (+ or -) of $\sin\theta$, $\cos\theta$ and $\tan\theta$ in each quadrant.

Definitions:

$\sin\theta = \frac{\quad}{\quad}$

$\cos\theta = \frac{\quad}{\quad}$

$\tan\theta = \frac{\quad}{\quad}$



Ex. ② State the quadrant in which the terminal side of θ lies.

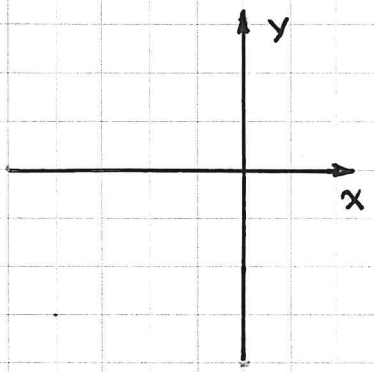
a) $\sin\theta < 0$ and $\cos\theta < 0$

b) $\cos\theta > 0$ and $\tan\theta < 0$

c) $\cot\theta < 0$ and $\csc\theta > 0$

Ex. ③ Determine the missing function values.

a) $\cos\theta = \frac{-4}{5}$, θ in QII

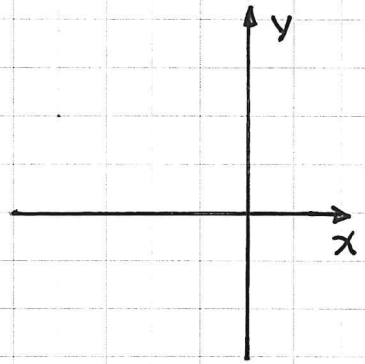


$\sin\theta =$ ___

$\sec\theta =$ ___

$\tan\theta =$ ___

b) $\cot\theta = -2$, $\pi/2 \leq \theta \leq 3\pi/2$

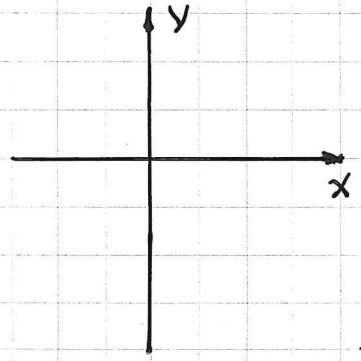


$\csc\theta =$ ___

$\cos\theta =$ ___

$\tan\theta =$ ___

c) $\csc\theta = -3/2$, $\tan\theta < 0$

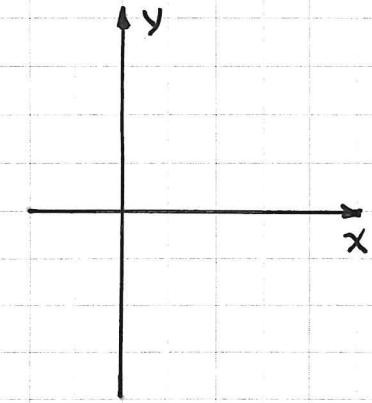


$\sin\theta =$ ___

$\sec\theta =$ ___

$\cot\theta =$ ___

d) $\sec\theta = 4/3$, $\cot\theta > 0$



$\csc\theta =$ ___

$\cos\theta =$ ___

$\cot\theta =$ ___