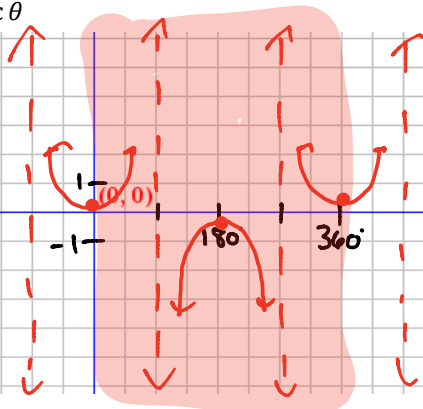


# Graphs & Inverses of Trig Functions

## 5A – Parent Graphs of Secant & Cosecant

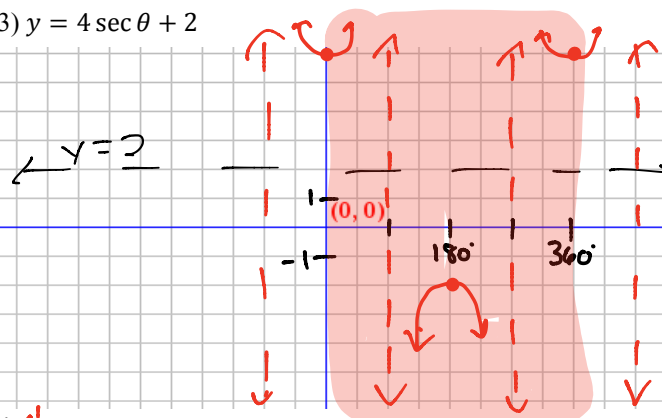
Graph a minimum of one period for each function.  
Use DEGREES.

#1)  $y = \frac{1}{5} \sec \theta$



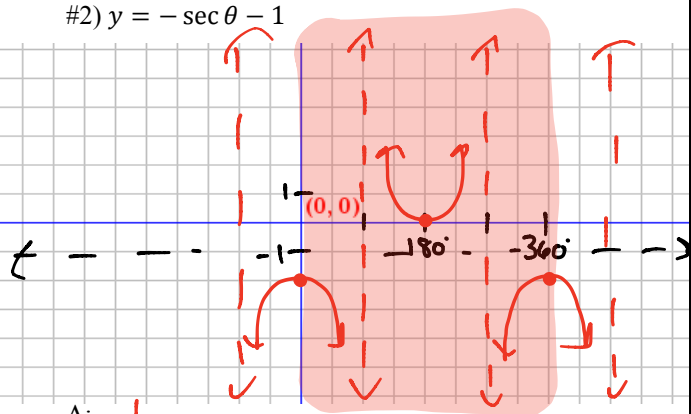
A:  $\frac{1}{5}$   
~~Amplitude:~~  
 Reflected over midline? **NO**  
 Vertical Displacement:  $0$   
 Midline:  $y = 0$   
 Phase Shift:  $0^\circ$   
 Period:  $360^\circ$

#3)  $y = 4 \sec \theta + 2$



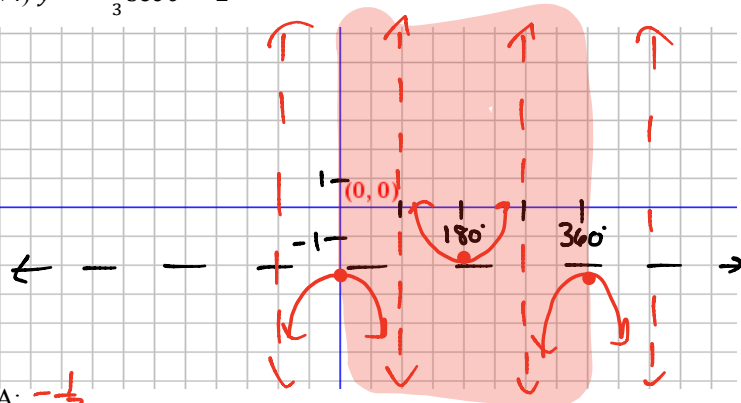
A:  $4$   
~~Amplitude:~~  
 Reflected over midline? **NO**  
 Vertical Displacement:  $2$   
 Midline:  $y = 2$   
 Phase Shift:  $0^\circ$   
 Period:  $360^\circ$

#2)  $y = -\sec \theta - 1$



A:  $-1$   
~~Amplitude:~~  
 Reflected over midline? **YES**  
 Vertical Displacement:  $-1$   
 Midline:  $y = -1$   
 Phase Shift:  $0$   
 Period:  $360^\circ$

#4)  $y = -\frac{1}{3} \sec \theta - 2$



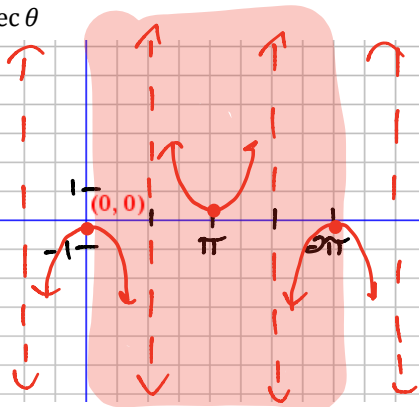
A:  $-\frac{1}{3}$   
~~Amplitude:~~  
 Reflected over midline? **YES**  
 Vertical Displacement:  $-2$   
 Midline:  $y = -2$   
 Phase Shift:  $0^\circ$   
 Period:  $360^\circ$

# Graphs & Inverses of Trig Functions

## 5A – Parent Graphs of Secant & Cosecant

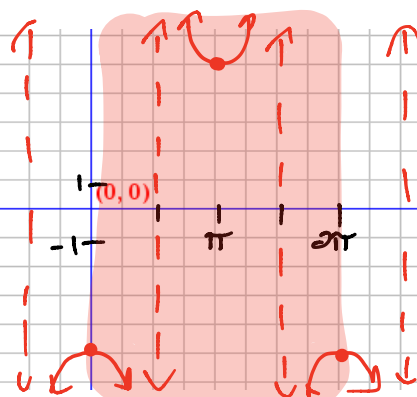
Graph a minimum of one period for each function.  
Use RADIANS.

#5)  $y = -\frac{1}{4} \sec \theta$



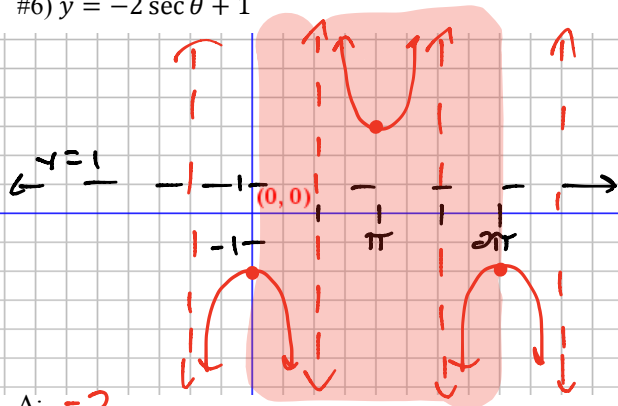
A:  ~~$-\frac{1}{4}$~~   
~~Amplitude:~~  
 Reflected over midline? **Yes**  
 Vertical Displacement: **0**  
 Midline:  **$y = 0$**   
 Phase Shift: **0**  
 Period:  **$2\pi$**

#7)  $y = -5 \sec \theta$



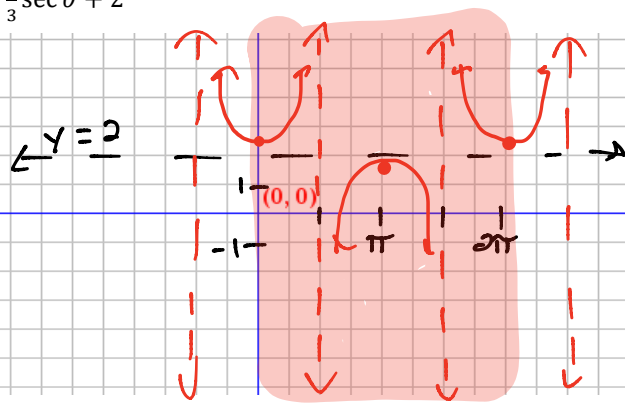
A:  ~~$-5$~~   
~~Amplitude:~~  
 Reflected over midline? **Yes**  
 Vertical Displacement: **0**  
 Midline:  **$y = 0$**   
 Phase Shift: **0**  
 Period:  **$2\pi$**

#6)  $y = -2 \sec \theta + 1$



A:  ~~$-2$~~   
~~Amplitude:~~  
 Reflected over midline? **Yes**  
 Vertical Displacement: **1**  
 Midline:  **$y = 1$**   
 Phase Shift: **0**  
 Period:  **$2\pi$**

#8)  $y = \frac{1}{3} \sec \theta + 2$



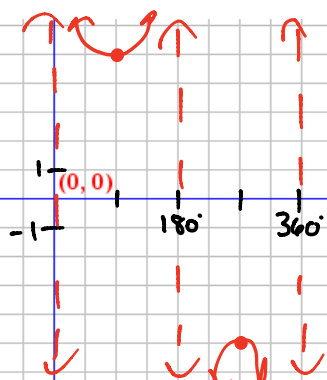
A:  ~~$\frac{1}{3}$~~   
~~Amplitude:~~  
 Reflected over midline? **NO**  
 Vertical Displacement: **2**  
 Midline:  **$y = 2$**   
 Phase Shift: **0**  
 Period:  **$2\pi$**

# Graphs & Inverses of Trig Functions

## 5A – Parent Graphs of Secant & Cosecant

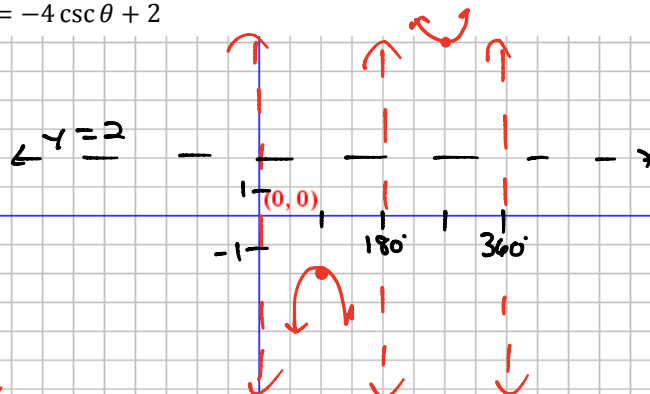
Graph a minimum of one period for each function.  
Use DEGREES.

#9)  $y = 5 \csc \theta$



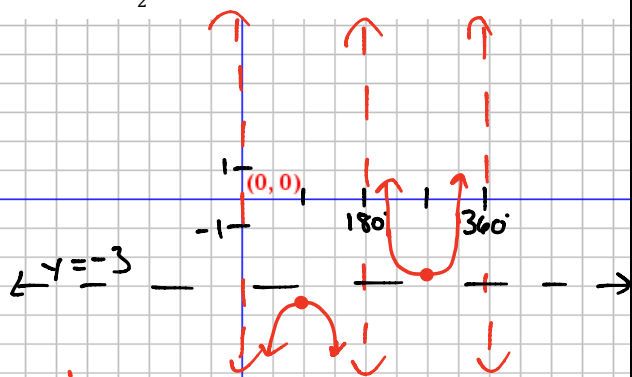
A:  $5$   
~~Amplitude:~~  
 Reflected over midline?  $NO$   
 Vertical Displacement:  $0$   
 Midline:  $y = 0$   
 Phase Shift:  $0$   
 Period:  $360^\circ$

#11)  $y = -4 \csc \theta + 2$



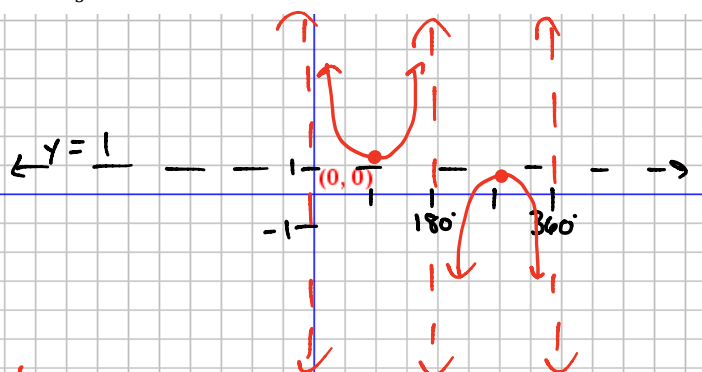
A:  $-4$   
~~Amplitude:~~  
 Reflected over midline?  $YES$   
 Vertical Displacement:  $2$   
 Midline:  $y = 2$   
 Phase Shift:  $0$   
 Period:  $360^\circ$

#10)  $y = -\frac{1}{2} \csc \theta - 3$



A:  $-\frac{1}{2}$   
~~Amplitude:~~  
 Reflected over midline?  $YES$   
 Vertical Displacement:  $-3$   
 Midline:  $y = -3$   
 Phase Shift:  $0$   
 Period:  $360^\circ$

#12)  $y = \frac{1}{3} \csc \theta + 1$



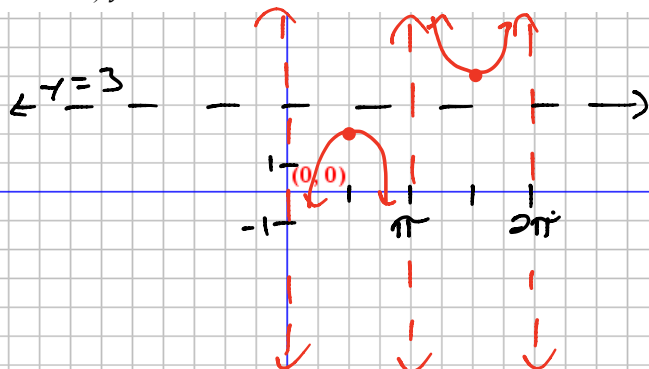
A:  $\frac{1}{3}$   
~~Amplitude:~~  
 Reflected over midline?  $NO$   
 Vertical Displacement:  $1$   
 Midline:  $y = 1$   
 Phase Shift:  $0$   
 Period:  $360^\circ$

# Graphs & Inverses of Trig Functions

## 5A – Parent Graphs of Secant & Cosecant

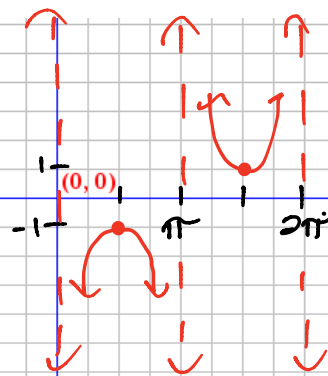
Graph a minimum of one period for each function.  
Use RADIANS.

#13)  $y = -\csc \theta + 3$



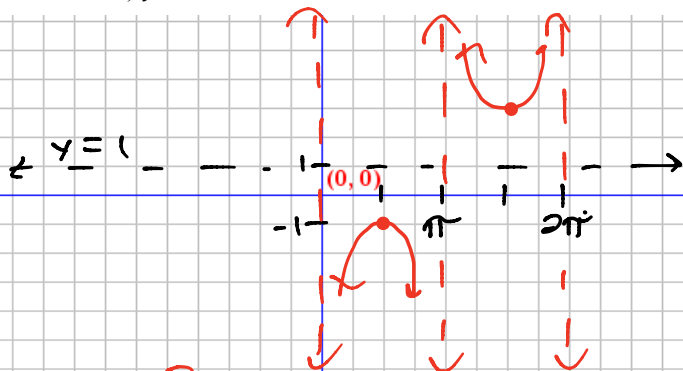
- A:  $-1$
- ~~Amplitude:~~
- Reflected over midline?
- Vertical Displacement:  $3$
- Midline:  $y=3$
- Phase Shift:  $0$
- Period:  $2\pi$

#15)  $y = -\csc \theta$



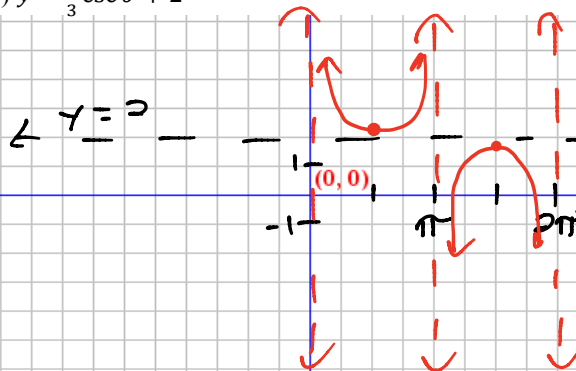
- A:  $-1$
- ~~Amplitude:~~
- Reflected over midline?  $Yes$
- Vertical Displacement:  $0$
- Midline:  $y=0$
- Phase Shift:  $0$
- Period:  $2\pi$

#14)  $y = -2 \csc \theta + 1$



- A:  $-2$
- ~~Amplitude:~~
- Reflected over midline?  $Yes$
- Vertical Displacement:  $1$
- Midline:  $y=1$
- Phase Shift:  $0$
- Period:  $2\pi$

#16)  $y = \frac{1}{3} \csc \theta + 2$



- A:  $\frac{1}{3}$
- ~~Amplitude:~~
- Reflected over midline?  $NO$
- Vertical Displacement:  $2$
- Midline:  $y=2$
- Phase Shift:  $0$
- Period:  $2\pi$