

Without using a calculator. Identify the amplitude, period, all VAs, and any shifts or reflections that occur on the graph. Sketch 2 periods in radians.

1. $y = 2 \tan x$

2. $y = -2 \tan x$

3. $y = \tan \frac{1}{2}x + 2$

4. $y = \frac{1}{4} \tan 6x$

5. $y = -3 \tan 2x - 1$
per = $\frac{\pi}{2}$

6. $y = \frac{1}{2} \cot \theta$

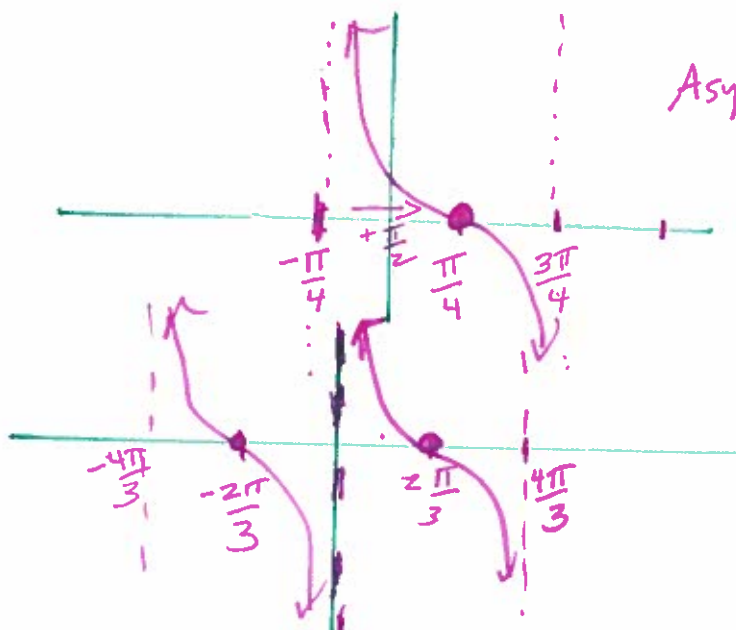
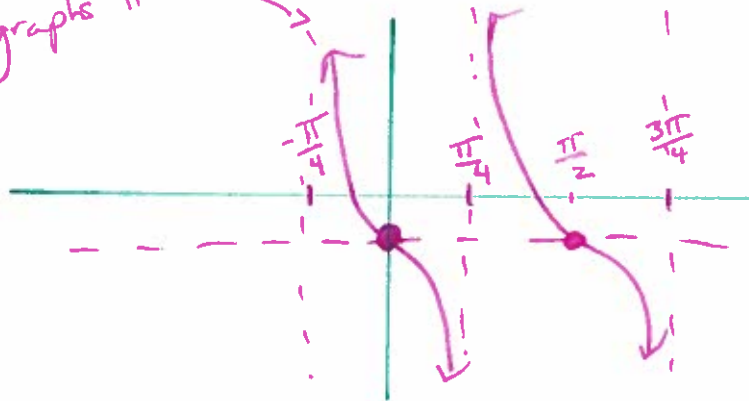
7. $y = -2 \cot 4x$

8. $y = 5 \cot \frac{1}{2}x - 1$

9. $y = 2 \cot(x + \frac{\pi}{4})$
per = π

10. $y = 7 \cot \frac{3}{4}\theta$
per = $\frac{4\pi}{3}$

Neg. tan graphs like cot



Asymptotes at $-\frac{\pi}{4}, \frac{3\pi}{4}$

Without using a calculator. Sketch two periods of the function in radians. Identify the amplitude, period, where all VAs occur, and any reflections, vertical shifts, and phase shifts.

1. $y = 2 \sec x$

2. $y = \frac{1}{2} \csc \theta + 3$

3. $y = 5 \csc \frac{1}{2} x - 2$

4. $y = -3 \sec 2x$
(cos)
 Per = π

5. $y = \frac{1}{4} \sec 6x$

6. $y = -2 \csc(x - \frac{\pi}{2})$
(sin)
 Per = 2π
 count by $\frac{\pi}{2}$

7. $y = 2 \csc(x + \pi)$

8. $y = -2 \sec x$

9. $y = \sec \frac{1}{2} x - 1$
(cos)
 Per = 4π

10. $y = 3 \csc \frac{3}{4} \theta$

