Class Discussion

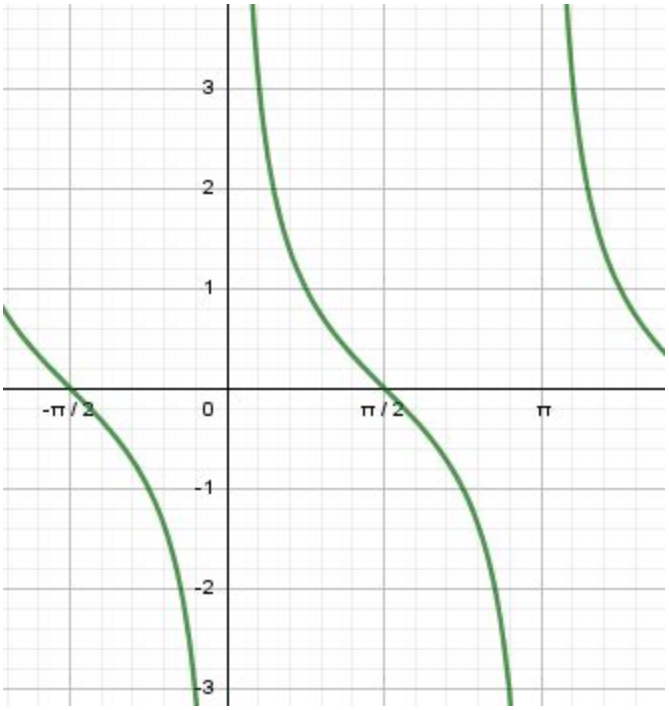
Unit 4 Topic 6 Part 2 Graphs of Cotangent Functions

Graph of $y = \cot x$

Period : π

V.A.s : $x = n\pi$

x-int @ $\left(\frac{2n+1}{2}\pi, 0\right)$



Graph $y = a\cot(bx - c) + d$

1. vertical shift $y = d$

2. period $P = \frac{\pi}{b}$

3. one-period span x y table

4. BP at $bx - c = -\frac{\pi}{2}$

5 EP at $bx - c = \frac{\pi}{2}$

6. V.A.s at midpoint of EP and BP

Ex 1: Graph $f(x) = -3\cot\left(\frac{1}{2}x - \frac{\pi}{4}\right)$

Ex 2: Graph $f(x) = \cot\left(\frac{3}{2}x - \pi\right) - \sqrt{3}$