

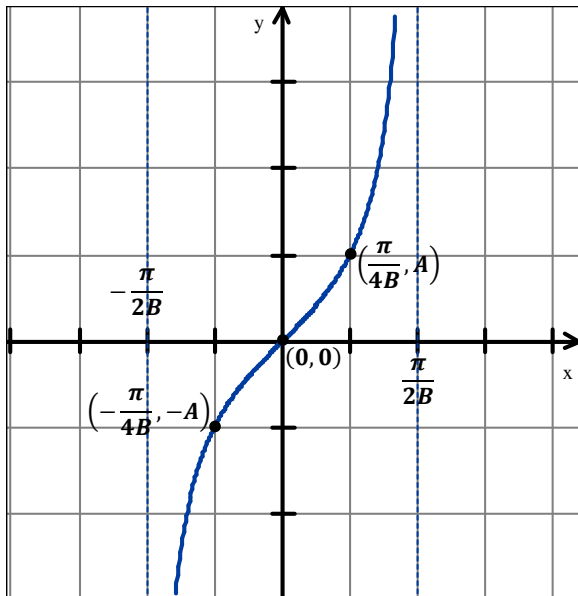
Graphing Tangent and Cotangent

The graphs of $y = k + A \tan(B(x - h))$ or $y = k + A \cot(B(x - h))$ where $B > 0$, will have the following characteristics:

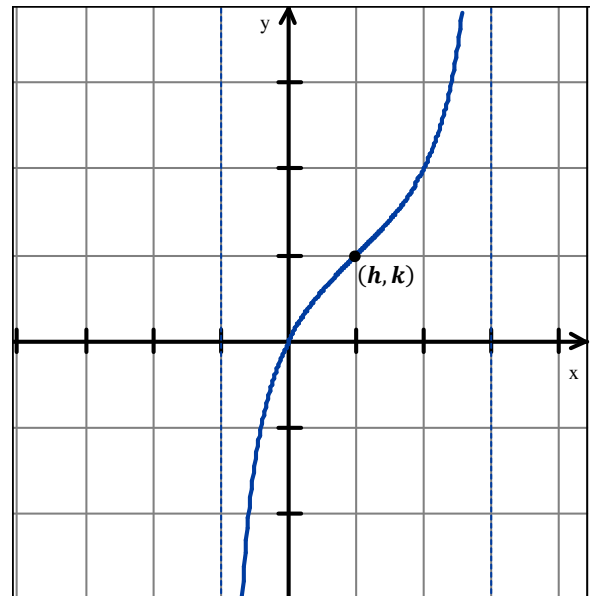
1. The Period is equal to $\frac{\pi}{B}$.
2. The Phase Shift is equal to h .
3. The Vertical Translation is equal to k .
4. $|A|$ is the factor by which the basic graphs are expanded or contracted vertically. If $A < 0$ the graph will be reflected about the x -axis.

(Note: The Cotangent graphs below show 2 periods while the Tangent only shows 1)

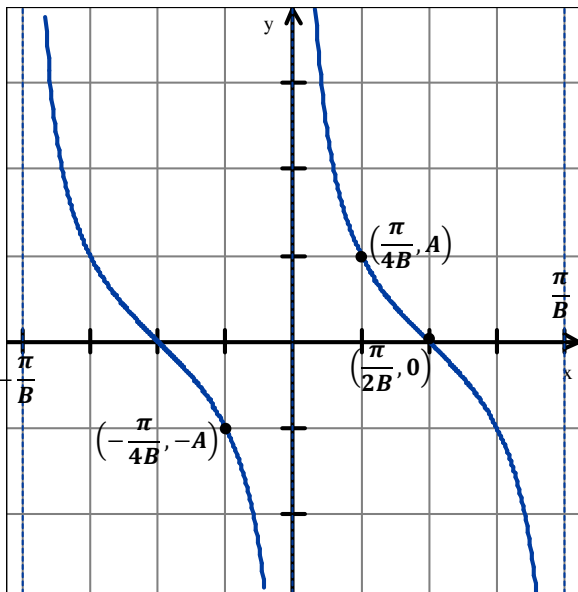
The Graph of $y = A \tan Bx$



The Graph of $y = k + A \tan(B(x - h))$



The Graph of $y = A \cot Bx$



The Graph of $y = k + A \cot(B(x - h))$

