

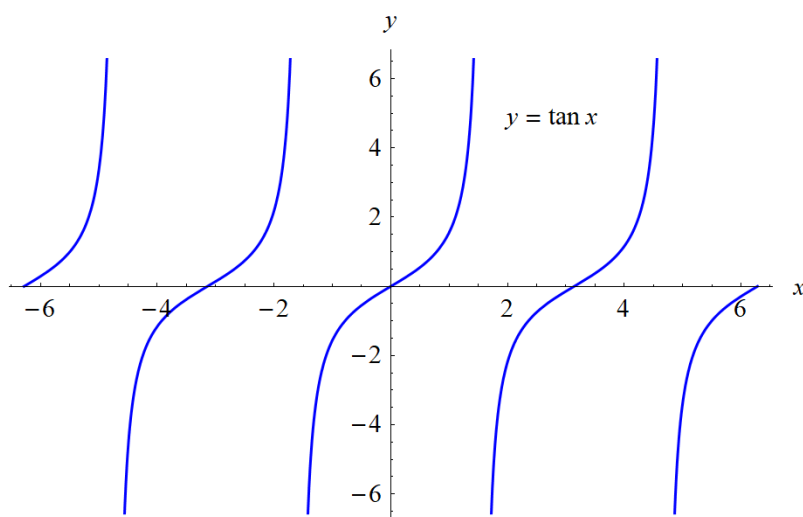
Exercise 22

Graph the function by hand, not by plotting points, but by starting with the graph of one of the standard functions given in Section 1.2, and then applying the appropriate transformations.

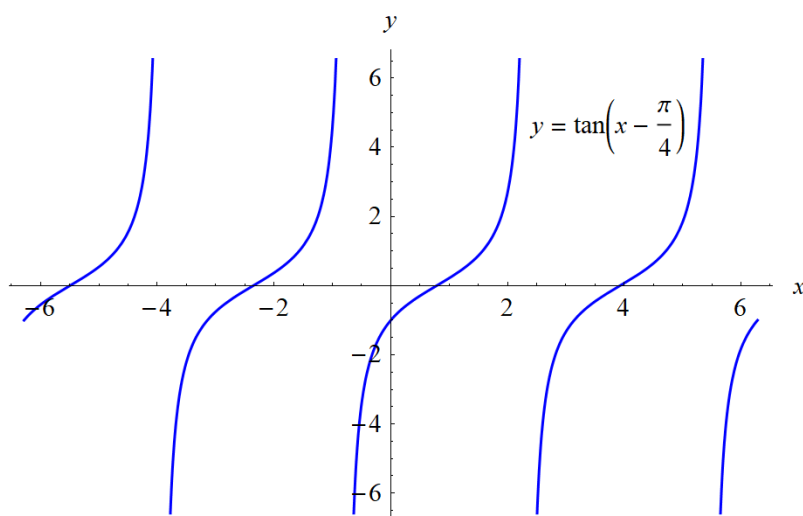
$$y = \frac{1}{4} \tan \left(x - \frac{\pi}{4} \right)$$

Solution

The graph of $y = \tan x$ is shown below.



Replacing x with $x - \frac{\pi}{4}$ shifts the graph to the right by $\pi/4$ units.



Placing $1/4$ in front of the function compresses the graph vertically by a factor of 4.

