

$$\boxed{41} \quad \sec^2 t = 2 \tan t \Rightarrow 1 + \tan^2 t = 2 \tan t \Rightarrow \tan^2 t - 2 \tan t + 1 = 0 \Rightarrow (\tan t - 1)^2 = 0 \Rightarrow \tan t = 1$$

Since $t_R = \tan^{-1} 1$ and tangent is positive in quadrants I & III, $t = \frac{\pi}{4}, \frac{5\pi}{4}$.

Graph $Y_1 = (1/\cos(X))^2$ and $Y_2 = 2 \tan(X)$ in $[0, 2\pi, \pi/4]$ by $[-4, 4, 1]$. See *Figure 41a*.

Table $Y_1 = (1/\cos(X))^2$ and $Y_2 = 2 \tan(X)$ starting at $x = 0$, incrementing by $\frac{\pi}{4}$. See *Figure 41b*.

$[0, 2\pi, \pi/4]$ by $[-4, 4, 1]$

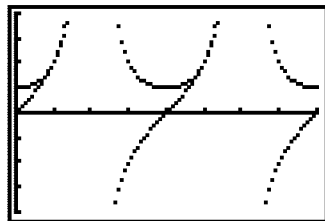


Figure 41a

X	Y1	Y2
0	1	0
.7854	2	1
1.5708	ERROR	ERROR
2.3562	2	-2
3.1416	1	0
3.927	2	1
4.7124	ERROR	ERROR

$Y_1 = (1/\cos(X))^2$

Figure 41b