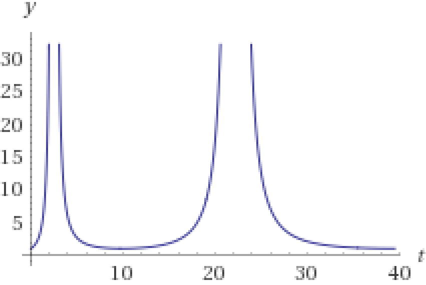
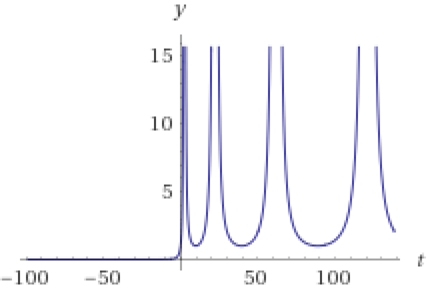
$$\sec^2\left(\sqrt{t}\right)$$



(t from 0 to 39.5)



(t from −98.7 to 138.2)

$$\frac{1}{\cos^2\left(\sqrt{t}\right)}$$

$$\frac{2}{\cos\left(2\sqrt{t}\right)+1}$$

$$\frac{4}{\left(e^{-i\sqrt{t}}+e^{i\sqrt{t}}\right)^{2}}$$

(no roots exist)

$$\left\{t \in \mathbb{R} : \left(0 \le t < \frac{\pi^2}{4} \text{ and } n \in \mathbb{Z}\right) \text{ or } \left(n \ge 0 \text{ and } \frac{1}{4}(2\pi n + \pi)^2 < t < \frac{1}{4}\pi^2 (2n+3)^2 \text{ and } n \in \mathbb{Z}\right)\right\}$$

$$1 + t + \frac{2\,t^2}{3} + \frac{17\,t^3}{45} + O(t^4)$$

(Taylor series)

$$\frac{d}{dt}\left(\sec^2\left(\sqrt{t}\right)\right) = \frac{\tan\left(\sqrt{t}\right)\sec^2\left(\sqrt{t}\right)}{\sqrt{t}}$$

$$\int \sec^2\left(\sqrt{t}\right) dt = 2\left(\sqrt{t}\,\tan\left(\sqrt{t}\right) + \log\left(\cos\left(\sqrt{t}\right)\right)\right) + \text{constant}$$

(assuming a complex-valued logarithm)

$$\lim_{t \to -\infty} \sec^2\left(\sqrt{t}\right) = 0$$