Question#31884

lim3sin(t/3)

t→3π/2

Solution. If $t \to \frac{3\pi}{2}$, then $\frac{t}{3} \to \frac{3\pi}{2 \cdot 3} = \frac{\pi}{2}$. Since sin is defined at the point $\frac{\pi}{2}$, then

$$\lim_{t \to \frac{3\pi}{2}} sin(\frac{t}{3}) = \sin\left(\frac{\frac{3\pi}{2}}{3}\right) = \sin(\frac{\pi}{2}) = 1.$$

Answer. 1.