$\lim_{x\to 0} \frac{\text{Sen } 3x}{x}$ = Multiplicando numerador y denominador Por 3. tenemos

$$\lim_{x\to 0} \frac{3\,\text{Sen}\,3x}{3x} = 3\lim \frac{\text{Sen } 3x}{3x} = 3 \cdot 1 = 3$$

CALCULAR UTILIZANDO LOS TEOREMAS:

$\lim_{x\to 0} \frac{1-\cos^2 x}{\text{Sen } x}$ $\lim_{x\to 0} \frac{\text{Tan } x}{x}$ $\lim_{x\to \frac{\pi}{2}} \frac{1-\text{Tan } x}{\cos 2x}$

$\lim_{x\to 0} \frac{1-\cos^2 x}{\text{Sen } x}$ $\lim_{x\to 0} x \cot x$ $\lim_{x\to 0} \frac{2-2\cos x}{x \cos x}$

$\lim_{x\to 0} \frac{\text{Sen } 2x}{x \text{Sen } x}$ $\lim_{x\to 0} \frac{\csc x - \cot x}{\text{Sen } x}$ $\lim_{x\to 0} \frac{\text{Sen } x}{\text{Tan } x}$

$\lim_{x\to 0} \frac{\text{Tan } x - \text{Sen } x}{x \cos x}$ $\lim_{x\to 0} \frac{1-\cos x}{\text{Sen } x}$ $\lim_{x\to 0} \frac{\text{Sen } x}{\text{Tan } x}$

$\lim_{x\to 0} \frac{\text{Sen}^2 x/2}{x^2}$ $\lim_{x\to 0} \frac{\text{Sen } 2x}{\text{Sen } x}$ $\lim_{x\to 0} \frac{\text{Sen } 4x}{x}$

$\lim_{x\to 0} \frac{\text{Tan } x}{7x}$ $\lim_{x\to 0} \frac{\text{Sen } 5x - \text{Sen } 3x}{\text{Sen } x}$ $\lim_{x\to 0} x \cot 3x$

$\lim_{x\to 0} \frac{\text{Sen } x}{\text{Tan } x}$ $\lim_{x\to 0} \frac{2\,\text{Sen } x - \text{Sen } 2x}{x \cos x}$

SUGERENCIAS:

$$\operatorname{Sen} x = \frac{1}{\operatorname{Csc} x} \qquad \operatorname{Csc} x = \frac{1}{\operatorname{Sen} x} \qquad \operatorname{Cos} x = \frac{1}{\operatorname{Sec} x}$$

$$\operatorname{Sec} x = \frac{1}{\operatorname{Cos} x} \qquad \operatorname{Tan} x = \frac{1}{\operatorname{Cot} x}$$

$$\operatorname{Sen}\ 2x = 2\operatorname{Sen} x \operatorname{Cos} x$$
$$\operatorname{Cos}\ 2x = \operatorname{Cos}^2 x - \operatorname{Sen}^2 x$$
$$\operatorname{Sen}(x+y) = \operatorname{Sen} x \operatorname{Cos} y + \operatorname{Sen} y \operatorname{Cos} x$$
$$\operatorname{Cos}(x+y) = \operatorname{Cos} x \operatorname{Cos} y - \operatorname{Sen} x \operatorname{Sen} y$$

TRABAJO EXTRACLASE

Calcular los siguientes limites.

$$\lim_{x \to 3} \frac{x^2 - 3x}{x - 3}$$

$$\lim_{x \to 6} \frac{x^2 + 9x + 18}{x^2 + 7x + 6}$$

$$\lim_{x \to -3} \frac{x^2 + 4x + 3}{x + 3}$$

$$\lim_{x \to -5} \frac{x^2 + 7x + 10}{x^2 + 13x + 40}$$

$$\lim_{x \to 5} \frac{x^2 - 25}{x^2 + 8x + 15}$$

$$\lim_{x \to 2} \frac{x^2 + x - 6}{x - 2}$$

$$\lim_{x \to -2} \frac{x^2 - 4x}{x^2 + 3x + 2}$$

$$\lim_{x \to -3} \frac{x^2 + 12x + 35}{x^2 + 17x + 70}$$

$$\lim_{x \to -2} \frac{x^2 + 2x}{x^2 + 2}$$

$$\lim_{x \to -4} \frac{x^2 + 3x - 4}{x^2 + 7x + 6}$$