

Límites Adicionales

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Calcula los siguientes límites si existen, o muestra que no existen

1. $\lim_{(x,y) \rightarrow (0,0)} \frac{\text{sen}(x^2 + |xy|)}{x}$
2. $\lim_{(x,y) \rightarrow (0,0)} \frac{|xy|}{x}$
3. $\lim_{(x,y) \rightarrow (0,0)} \frac{|y|x}{y} + x \text{sen} \frac{1}{y}$
4. $\lim_{(x,y) \rightarrow (0,0)} \frac{x^{-2} 4^{-y/x^2}}{y^{-1}}$
5. $\lim_{(x,y) \rightarrow (0,0)} \frac{x^6}{(x^2 - y)^2 + x^6}$
6. $\lim_{(x,y) \rightarrow (0,0)} \frac{xy(x^2 + y^2) \sqrt{x^2 + y^2}}{(x^2 + y^2)^2 + x^4 + y^2(x^2 + y^2)}$
7. $\lim_{(x,y) \rightarrow (0,0)} \frac{xy}{\sqrt{x^2 + y^2} + \frac{y}{4}}$
8. $\lim_{(x,y) \rightarrow (0,0)} \frac{x^2}{\sqrt{x^2 + y^2} + \frac{x}{3}}$
9. $\lim_{(x,y) \rightarrow (0,0)} \frac{x^3}{x + y}$
10. $\lim_{(x,y) \rightarrow (0,0)} \frac{x^4 - y^4}{x^2 + xy + y^2}$
11. $\lim_{(x,y) \rightarrow (0,0)} \frac{\sqrt{1 - \cos(\sqrt{x^2 + y^2})}}{\text{sen}(\sqrt{x^2 + y^2})}$