

1. Evaluate: $\lim_{x \rightarrow 0} \frac{\sin x}{x - \tan x}$
2. Evaluate: $\lim_{x \rightarrow 0} \frac{x - \sin x}{x^3}$
3. Evaluate: $\lim_{x \rightarrow \pi/2} \frac{1 + \sin x}{\cos x}$
4. Evaluate: $\lim_{x \rightarrow 0} \frac{2x}{\tan^{-1} x}$
5. Evaluate: $\lim_{x \rightarrow \infty} \frac{x \ln x}{x + \ln x}$
6. Evaluate: $\lim_{x \rightarrow 0^+} \frac{\ln x}{\cot x}$
7. Evaluate: $\lim_{x \rightarrow \infty} x \sin\left(\frac{\pi}{x}\right)$
8. Evaluate: $\lim_{x \rightarrow \infty} x \left(\frac{\pi}{2} - \tan^{-1} x\right)$
9. Evaluate: $\lim_{x \rightarrow \infty} x(e^{1/x} - 1)$
10. Evaluate: $\lim_{x \rightarrow \infty} (x^2 - 1)e^{-x^2}$
11. Evaluate: $\lim_{x \rightarrow \pi/2^-} (\tan x)^{\cos x}$
12. Evaluate: $\lim_{x \rightarrow -\infty} (1 + e^x)^{e^{-x}}$
13. Evaluate: $\lim_{x \rightarrow 1^-} (1 - x)^{\ln x}$
14. Evaluate: $\lim_{x \rightarrow 0^+} (1 + ax)^{b/x}$
15. Evaluate: $\lim_{x \rightarrow \pi/2} (\sec x - \tan x)$
16. Evaluate: $\lim_{x \rightarrow 0^+} \left(\frac{1}{\sqrt{x^2 + x}} - \frac{1}{x} \right)$
17. Evaluate: $\lim_{x \rightarrow 1} \left(\frac{1}{x - 1} - \frac{1}{\ln x} \right)$
18. Evaluate: $\lim_{x \rightarrow 0^-} \left(\frac{1}{x} - \frac{1}{\sin x} \right)$
19. Evaluate: $\lim_{x \rightarrow \infty} (\sqrt{x^2 + 6x} - x)$