$$\lim_{x\to 0} \frac{1-\cos(x/2)}{1-\cos(x)}$$

$$\lim_{x\to 0} \frac{\sqrt{1+x\sin(x)}-\cos(x)}{\sin^2(x/2)}$$

$$\lim_{x\to 0} \left(\frac{1}{\sin(x)}-\frac{1}{x}\right)$$

$$\lim_{x\to \infty} x\ln\left(1+\frac{1}{x}\right)$$

$$\lim_{x\to 0} \frac{\sqrt{\cos(ax)}-\sqrt{\cos(bx)}}{x^2}$$

$$\lim_{x\to 0} \left(\sqrt{\frac{2}{x}+\sqrt{\frac{3}{x}}}-\sqrt{\frac{2}{x}-\sqrt{\frac{3}{x}}}\right)$$

$$\lim_{x\to 0} \left(\frac{\sin(x)}{x}\right)^{\frac{3}{x^2}}$$

$$\lim_{x\to 0} \frac{\sqrt[3]{1+x}-1-\frac{x}{3}}{\cos(x)-1}$$

$$\lim_{x\to 0} (\ln 3)^{\ln(x)}$$

$$\lim_{x\to 1} \frac{2^x-2}{3^x-3}$$

$$\lim_{x\to -\infty} \left(\sqrt{x^6+x^3}+x^3\right)$$

$$\lim_{x\to 2} \left(\frac{1}{x-2}\right)$$

$$\lim_{x\to 0} \frac{x^2}{{}^2(x)}$$

$$\lim_{x\to \infty} \left(x-\sqrt{x^2-3x+1}\right)$$

$$\lim_{x\to 0} \frac{(x)}{\sqrt{\sin(x)}}$$

$$\lim_{x\to -1} \frac{\ln(x^2)}{x+1}$$

$$\lim_{x\to\infty} \frac{\cosh(x)}{x+\sinh(x)}$$

$$\lim_{x\to 0} \frac{\sin(x^2)}{\ln(x+1)-x}$$

$$\lim_{x\to 1} \frac{\cos(x-1)-x}{1-x+\ln(x)}$$

$$\lim_{x\to 0} \frac{{}^{2}(x)}{x^3+x^2}$$

$$\lim_{x\to\infty} \frac{\sin(x)-\sinh(x)}{x^3}$$

$$\lim_{x\to\infty} \left(\frac{x^2}{345}\sin\left(\frac{3}{x}\right)\cdot\cos\left(\frac{4}{x}\right)\cdot\left(\frac{5}{x}\right)\right)$$

$$\lim_{x\to\infty} \frac{2+\ln(1000x)}{1000+\ln(2x)}$$

$$\lim_{x\to 3} \left(\frac{1}{3-x}+\frac{4}{x^2-2x-3}\right)$$

$$\lim_{x\to 0} \frac{10^x-1}{\sin(x)}$$

$$\lim_{x\to -\infty} \frac{|x|+x\cdot\left(\frac{1}{x}\right)}{|x|+x\cdot\sin\left(\frac{1}{x}\right)}$$

$$\lim_{x\to 0} \frac{\sin(x)}{\sin\left((x)\right)}$$

$$\lim_{x\to\infty} \sin\left((x)\right)$$

$$\lim_{x\to 1} \frac{\ln(x^3)}{2\left(x^2-1\right)}$$

$$\lim \left(\frac{1}{x^2}\right)^{\ln(1-x)}$$

$$\lim_{x\to 0} \left(\frac{1}{x}\right)^{\sin(x)}$$

$$\lim_{x\to 1} \left(\frac{2}{x^2-1}-\frac{1}{x-1}\right)$$

$$\lim_{x\to 6} \frac{x^3 - 11x^2 + 24x + 36}{(x-6)^2}$$

$$\lim_{x\to\infty} \frac{\sqrt{9x^2+3x+1} - x}{\sqrt{4x^2-3x+1} + 2x}$$

$$\lim_{x\to 0} \frac{e^{\sin(x)} - 1}{2x\ln(1+x)}$$

$$\lim_{x\to\infty} x\ln\left(1 + \frac{x}{1+x^2}\right)$$

$$\lim_{x\to 0} \frac{\sqrt[3]{\cos(x)} - 1}{x^2}$$

$$\lim_{x\to\infty} \left(2^x + \left(\frac{1}{2}\right)^x\right)^{\frac{1}{x}}$$

$$\lim_{x\to\pi/2} (\tan(x))^{\sin(2x)}$$

$$\lim_{x\to 0} \frac{e^{3x} - 3x - 1}{\sin^2(x)}$$

$$\lim_{x\to 0} \left(\frac{1}{x} - \frac{1}{e^x - 1}\right)$$

$$\lim_{x\to 0} \left(\frac{1}{x^2}\ln\cosh(\alpha x)\right) \alpha > 0$$

$$\lim \frac{\sin(x)\cdot\cos(x)}{e^{3x} - 1}$$

$$\lim_{x\to 0} \frac{e^{\sin(x)} - (x+1)\cosh(x)}{(x+1)^2 - 2x - 1}$$

$$\int \frac{1}{4\cos(x) - 3\sin(x)} dx \left(n = \tan\left(\frac{x}{2}\right)\right)$$

$$\lim_{x\to\infty} x\left(e^{\frac{1}{x}} - 1\right)$$

$$\lim_{x\to 0^+} x^{\frac{1}{\ln(\sin(x))}}$$

$$\lim_{x\to 0^+} (x\sin(2x))^{\frac{1}{3\ln(x)}}$$

$$\lim_{x\to 0} \frac{x\left(\sqrt[3]{1+x^2}-\sqrt[3]{1-x^2}\right)}{\sqrt{1+x^3}-1}$$

$$\lim_{x\to 0} \left(\frac{1}{1-e^x}+\frac{1}{\sinh(x)}\right)$$

$$\lim_{x\to\infty} \left(\sqrt{x^2-2x+3}-\sqrt{x^2+4x}\right)$$

$$\lim_{x\to e} \frac{x^e-e^x}{(x-e)^2}$$

$$\lim_{x\to\infty} \left(\cos\sqrt{x+1}-\cos\sqrt{x-1}\right)$$

$$\lim_{x\to 0} \frac{\sqrt{1+4x}-1-2x}{17x^2}$$

$$\lim_{x\to\infty} \frac{\cosh(x+1)}{\sinh(x)}$$

$$\lim_{x\to 0^+} (\sin(x))^{2x}$$

$$\lim_{x\to\infty} \left(\cos\frac{1}{\sqrt{x}}\right)^x$$

$$\lim_{x\to 0} \frac{\sqrt[10]{1+3x^4+x^9}-1}{x^4}$$

$$\lim_{x\to 0} \frac{x}{1-\cos(x)}\left(e^{5x}-e^{-x}\right)$$

$$\lim_{x\to 0} (1+2x)^{\frac{\sin(x)}{x^2}}$$

$$\lim_{x\to 0^+} x^{\arcsin(x)}$$

$$\lim_{x\to 0} \frac{\sqrt[4]{1+3x^2}-1}{\sinh(x^2)}$$

$$\lim_{x\to\infty} x\left[\left(1+\frac{1}{x}\right)^x-e\right]$$

$$\lim_{x\to 0} (\cot(x)\sin(x))$$

$$\lim_{x \to 0^+} \frac{(\tan(7x))}{\ln(\tan 2x)}$$

$$\lim_{x \to 0} \frac{\cos(x) + 3x - 1}{2x}$$

$$\lim_{x \to a} \frac{x^a - a^x}{a^x - a^a} a > 0, a \neq 1$$

$$\lim_{x \to \infty} \frac{\ln(\ln(x))}{\ln(x)}$$