$\sin x + 1)' =$

$\left[\left(3 + \frac{1}{\sin x} + \frac{\sqrt{x}}{\sin x}\right)\right] =$

$\left(3 + \frac{1}{\sin x} + \frac{\sqrt{3}}{\sin x}\right)$

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$$\lim_{x\to 0} (\sin 5x)^{1-\cos x} =$$

$$= \lim_{x\to 0} e^{(1-\cos x)\log \sin 5x} =$$

$$= \lim_{x\to 0} e^{(1-\cos x)\log \frac{\sin 5x}{5x}\cdot 5x} =$$

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

$$= \lim_{x\to 0} e^{\frac{1-\cos x}{x^2}\left(x^2 \log \frac{\sin 5x}{5x} + x^2 \log 5x\right)} =$$

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

$$= e^0 = 1$$