$$
\text { Let } \quad f(x)=\cos (x)+\sin (x)
$$

$$
\begin{aligned}
& g(x)=4 e^{x}-3 \cos (x)-\frac{1}{x} \\
& h(x)=3 \sin (4)+2 \sin (x)+x^{732}
\end{aligned}
$$

1. Find the derivative of each function.
2. Find an antiderivative of each function.

Check your answer by taking the derivative!
3. Find the maximum and minimum values of $f(x)$ on the interval $[-\pi, \pi]$.

