

$$\begin{aligned} 38. \quad \lim_{x \rightarrow \infty} \frac{x - \cos x}{x} &= \lim_{x \rightarrow \infty} \left(1 - \frac{\cos x}{x} \right) \\ &= 1 - 0 = 1 \end{aligned}$$

Note:

$\lim_{x \rightarrow \infty} \frac{\cos x}{x} = 0$ by the Squeeze Theorem because

$$-\frac{1}{x} \leq \frac{\cos x}{x} \leq \frac{1}{x}.$$