Adding two plane waves to get a standing wave.

\[
A := 1 \quad k := 2\pi \quad \omega := 2\pi \\
t := \frac{\text{FRAME}}{20}
\]

\[y_R(x,t) := A \cdot \sin(k \cdot x - \omega \cdot t)\]  
Wave going to the right.

\[y_L(x,t) := A \cdot \sin(k \cdot x + \omega \cdot t)\]  
Wave going to the left.

\[y(x,t) := y_R(x,t) + y_L(x,t)\]  
Sum of the two waves = standing wave