Find line of intersection of:

\[ \begin{align*}
  x + y + z &= 0 \\
  x - z &= 0
\end{align*} \]

The solution we give is a line in \( \mathbb{R}^3 \), so we need to parameterize it: \( \mathbf{r}(t) = \langle x(t), y(t), z(t) \rangle \)

Since \( x - z = 0 \), we get \( x = z \), and we can write

\[ \mathbf{w}(t) = \mathbf{v}(t) = t \]

Then since the 1st eqn. tells us \( y = -x - z \), we see the form:

\[ \mathbf{r}(t) = \langle t, -2t, t \rangle \]