$$
\begin{array}{r}
x^2 + 2x + 2 \\
x - 1 \overline{\smash{)}\ x^3 + x^2 - 1} \\
\underline{-x^3 + x^2} \\
2x^2 \\
\underline{-2x^2 + 2x} \\
2x - 1 \\
\underline{-2x + 2} \\
1
\end{array}
$$