

$$\begin{array}{rcl}
 & x^2 - 2x + 2 & \\
 x + 1 \overline{) \begin{array}{r} x^3 - x^2 + 2 \\ x^3 + x^2 \end{array} } & \longleftarrow & x^2(x + 1) \\
 \hline
 & -2x^2 & \\
 & \underline{-2x^2 - 2x} & \longleftarrow -2x(x + 1) \\
 & & \\
 & 2x + 2 & \\
 & \underline{2x + 2} & \longleftarrow 2(x + 1) \\
 & 0 &
 \end{array}$$