

$$\begin{array}{rcl}
 & 3x + 1 & \longleftarrow P(x) \\
 D(x) \rightarrow x^2 - 3x + 2 & \overline{\begin{array}{r} 3x^3 - 8x^2 + 4x - 1 \\ 3x^3 - 9x^2 + 6x \end{array}} & \begin{array}{l} \longleftarrow N(x) \\ \longleftarrow 3x \cdot D(x) \end{array} \\
 & \overline{x^2 - 2x - 1} & \longleftarrow N(x) - 3x \cdot D(x) \\
 & \overline{x^2 - 3x + 2} & \longleftarrow 1 \cdot D(x) \\
 & x - 3 & \longleftarrow R(x) = N(x) - (3x + 1)D(x)
 \end{array}$$