

- Use synthetic division to divide: $(x^3 + 3x^2 - 4x - 12) \div (x + 2)$

$$\begin{array}{r|rrrr} -2 & 1 & 3 & -4 & -12 \\ & & -2 & -2 & 12 \\ \hline & 1 & 1 & -6 & 0 \end{array}$$

↓

$x^2 + x - 6$