

$$x - 2)$$

$$x^3 + 4x^2$$

$$- 3$$

$$\begin{array}{r} x^2 \\ x-2 \overline{) x^3 + 4x^2 - 3} \end{array}$$

$$\begin{array}{r}
 x^2 \\
 \hline
 x - 2 \overline{) \begin{array}{r} x^3 + 4x^2 \\ - x^3 + 2x^2 \end{array}} - 3
 \end{array}$$

$$\begin{array}{r}
 x^2 \\
 \hline
 x - 2 \overline{) \quad x^3 + 4x^2 \quad - 3} \\
 \underline{-x^3 + 2x^2} \phantom{- 3} \\
 6x^2
 \end{array}$$

$$\begin{array}{r}
 x^2 + 6x \\
 \hline
 x - 2 \overline{) \begin{array}{r} x^3 + 4x^2 - 3 \\ - x^3 + 2x^2 \end{array}} \\
 \hline
 6x^2
 \end{array}$$



$$\begin{array}{r}
 \phantom{x-2)} \phantom{x^3+} x^2 + 6x \\
 \hline
 x-2) \phantom{x^3+} x^3 + 4x^2 \phantom{+ 6x} - 3 \\
 \phantom{x-2)} \underline{-x^3 + 2x^2} \phantom{+ 6x} \\
 \phantom{x-2)} \phantom{x^3+} 6x^2 \phantom{+ 6x} \\
 \phantom{x-2)} \phantom{x^3+} \underline{-6x^2 + 12x} \phantom{- 3} \\
 \phantom{x-2)} \phantom{x^3+} \phantom{6x^2+} 12x - 3
 \end{array}$$

$$\begin{array}{r}
 \phantom{x-2)} \phantom{x^3+} x^2 + 6x + 12 \\
 \hline
 x-2) \phantom{x^3+} x^3 + 4x^2 \phantom{+ 6x} - 3 \\
 \phantom{x-2)} \underline{-x^3 + 2x^2} \phantom{+ 6x} \\
 \phantom{x-2)} \phantom{x^3+} 6x^2 \phantom{+ 6x} - 3 \\
 \phantom{x-2)} \phantom{x^3+} \underline{-6x^2 + 12x} \phantom{- 3} \\
 \phantom{x-2)} \phantom{x^3+} \phantom{6x^2+} 12x - 3
 \end{array}$$



$$\begin{array}{r}
 x^2 + 6x + 12 \\
 \hline
 x - 2 \big) \quad x^3 + 4x^2 \qquad - 3 \\
 \quad - x^3 + 2x^2 \\
 \quad \hline
 \qquad 6x^2 \\
 \qquad - 6x^2 + 12x \\
 \qquad \hline
 \qquad \qquad 12x - 3 \\
 \qquad \qquad - 12x + 24 \\
 \qquad \qquad \hline
 \qquad \qquad \qquad 21
 \end{array}$$

$$\begin{array}{r}
 \phantom{x-2)} \phantom{x^3} x^2 + 6x + 12 \\
 \hline
 x-2) \phantom{x^3} x^3 + 4x^2 \phantom{+ 6x} - 3 \\
 \phantom{x-2)} \underline{-x^3 + 2x^2} \phantom{+ 6x} - 3 \\
 \phantom{x-2)} \phantom{x^3} 6x^2 \phantom{+ 6x} - 3 \\
 \phantom{x-2)} \phantom{x^3} \underline{-6x^2 + 12x} - 3 \\
 \phantom{x-2)} \phantom{x^3} \phantom{6x^2} 12x - 3 \\
 \phantom{x-2)} \phantom{x^3} \phantom{6x^2} \underline{-12x + 24} \\
 \phantom{x-2)} \phantom{x^3} \phantom{6x^2} \phantom{-12x} 21
 \end{array}$$