

### Check Your Understanding

**Example 3** Given a polynomial and one of its factors, find the remaining factors of the polynomial.

4.  $x^3 - 6x^2 + 11x - 6; x - 1$

5.  $x^3 + x^2 - 16x - 16; x + 1$

$$\begin{array}{r} \boxed{\phantom{0}} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ - \phantom{0} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \end{array}$$

Write the result in polynom format

$$\boxed{\phantom{00}}x^2 - 5x + \boxed{\phantom{00}}$$

$$= (x \boxed{\phantom{0}})(x \boxed{\phantom{0}})$$

$$\begin{array}{r} \boxed{\phantom{0}} \\ -16 \\ \hline 1 \quad 0 \quad \boxed{\phantom{0}} \end{array}$$

Write the result in polynom format

$x^2 - \square$

$$= (x \boxed{\phantom{00}})(x \boxed{\phantom{00}})$$