

## 6.3

$$1) \begin{array}{l} p^2 + 17p + 72 \\ (p + 8)(p + 9) \end{array} \begin{array}{c} \cancel{72} \\ \begin{array}{cc} 8 & 9 \\ \hline 17 \end{array} \end{array}$$

$$3) \begin{array}{l} n^2 - 9n + 8 \\ (n - 8)(n - 1) \end{array} \begin{array}{c} \cancel{8} \\ \begin{array}{cc} 8 & -1 \\ \hline -9 \end{array} \end{array}$$

$$5) \begin{array}{l} x^2 - 9x - 10 \\ (x - 10)(x + 1) \end{array} \begin{array}{c} \cancel{10} \\ \begin{array}{cc} -10 & 1 \\ \hline -9 \end{array} \end{array}$$

$$7) \begin{array}{l} b^2 + 12b + 32 \\ (b + 4)(b + 8) \end{array} \begin{array}{c} \cancel{32} \\ \begin{array}{cc} 4 & 8 \\ \hline 12 \end{array} \end{array}$$

$$9) \begin{array}{l} x^2 + 3x - 70 \\ (x + 10)(x - 7) \end{array} \begin{array}{c} \cancel{-70} \\ \begin{array}{cc} 10 & -7 \\ \hline 3 \end{array} \end{array}$$

$$11) \begin{array}{l} n^2 - 8n + 15 \\ (n - 3)(n - 5) \end{array} \begin{array}{c} \cancel{15} \\ \begin{array}{cc} -3 & -5 \\ \hline -8 \end{array} \end{array}$$

$$13) \begin{array}{l} p^2 + 15p + 54 \\ (p + 9)(p + 6) \end{array} \begin{array}{c} \cancel{54} \\ \begin{array}{cc} 9 & 6 \\ \hline 15 \end{array} \end{array}$$

$$15) \begin{array}{l} n^2 - 15n + 56 \\ (n - 7)(n - 8) \end{array} \begin{array}{c} \cancel{56} \\ \begin{array}{cc} -7 & -8 \\ \hline -15 \end{array} \end{array}$$

$$17) \begin{array}{l} u^2 - 8uv + 15v^2 \\ (u - 5v)(u - 3v) \end{array} \begin{array}{c} \cancel{15} \\ \begin{array}{cc} -5 & -3 \\ \hline -8 \end{array} \end{array}$$

$$19) \begin{array}{l} m^2 - 2mn - 8n^2 \\ (m + 4n)(m - 2n) \end{array} \begin{array}{c} \cancel{-8} \\ \begin{array}{cc} 4 & -2 \\ \hline 2 \end{array} \end{array}$$

$$21) \begin{array}{l} x^2 - 11xy - 12y^2 \\ (x - 9y)(x - 2y) \end{array} \begin{array}{c} \cancel{18} \\ \begin{array}{cc} -9 & -2 \\ \hline -11 \end{array} \end{array}$$

$$23) \begin{array}{l} x^2 + xy - 12y^2 \\ (x + 4y)(x - 3y) \end{array} \begin{array}{c} \cancel{-12} \\ \begin{array}{cc} 4 & -3 \\ \hline 1 \end{array} \end{array}$$

$$25) \begin{array}{l} x^2 + 4xy - 12y^2 \\ (x + 6y)(x - 2y) \end{array} \begin{array}{c} \cancel{-12} \\ \begin{array}{cc} 6 & -2 \\ \hline 4 \end{array} \end{array}$$

$$27) \begin{array}{l} 5a^2 + 60a + 100 \\ 5(a^2 + 12a + 20) \\ 5(a + 10)(a + 2) \end{array} \begin{array}{c} \cancel{20} \\ \begin{array}{cc} 10 & 2 \\ \hline 12 \end{array} \end{array}$$

$$29) \begin{array}{l} 6a^2 + 24a - 192 \\ 6(a^2 + 4a - 32) \\ 6(a + 8)(a - 4) \end{array} \begin{array}{c} \cancel{-32} \\ \begin{array}{cc} 8 & -4 \\ \hline 3 \end{array} \end{array}$$

$$31) \begin{array}{l} 6x^2 + 18xy + 12y^2 \\ 6(x^2 + 3xy + 2y^2) \\ 6(x + y)(x + 2y) \end{array} \begin{array}{c} \cancel{2} \\ \begin{array}{cc} 1 & 2 \\ \hline 3 \end{array} \end{array}$$

$$33) \begin{array}{l} 6x^2 + 96xy + 378y^2 \\ 6(x^2 + 16xy + 63y^2) \\ 6(x + 9y)(x + 7y) \end{array} \begin{array}{c} \cancel{63} \\ \begin{array}{cc} 9 & 7 \\ \hline 16 \end{array} \end{array}$$