

section 6.1

6.1 (1)

$$2) 8a^2b, 10ab^2 \quad \underline{\underline{2ab}}$$

$$4) 28x^2y^4, 42x^4y^4 \quad \underline{\underline{14x^2y^4}}$$

$$6) 20y^3, 28y^2, 40y \quad \underline{\underline{4y}}$$

$$8) 27p^2q^3, 45p^3q^4, 9q^4q^3 \quad \underline{\underline{9p^2q^3}}$$

$$10) 14p+35 = \underline{\underline{7(2p+5)}} \quad 12) 45b-18 = \underline{\underline{9(5b-2)}}$$

$$14) 4y^2+8y-4 = \underline{\underline{4(y^2+2y-1)}}$$

$$16) 10q^2+14q+20 = \underline{\underline{2(5q^2+7q+10)}}$$

$$18) 12x^3-10x = \underline{\underline{2x(6x^2-5)}}$$

$$20) 8m^2-40m+16 = \underline{\underline{8(m^2-5m+2)}}$$

$$22) 24y^3-18y^2-30y = \underline{\underline{6y(4y^2-3y-5)}}$$

$$24) 21pq^2 + 35p^2q^2 - 28q^3 = \underline{\underline{7q^2(3p + 5p^2 - 4q)}}$$

$$26) 24a^3b + 6a^2b^2 - 18ab^3 = \underline{\underline{6ab(4a^2 + ab - 3b^2)}}$$

$$28) -3b + 12 = \underline{\underline{-3(b - 4)}}$$

$$30) -5y^3 + 35y^2 - 15y = \underline{\underline{-5y(y^2 - 7y + 3)}}$$

$$32) -6a^3b - 12a^2b^2 + 18ab^3 = \underline{\underline{-6ab(a^2 + 2ab - 3b^2)}}$$

$$34) 2x(x-1) + 9(x-1) = \{2x(x-1) + 9(x-1)\}$$

$$= \underline{\underline{(x-1)\{2x+9\}}}$$

$$36) 6m(m-5) - 7(m-5) = \{6m(m-5) - 7(m-5)\}$$

$$= \underline{\underline{(m-5)\{6m-7\}}}$$

$$38) cd + 6c + 4d + 24$$

$$= \{c(d+6) + 4(d+6)\}$$

$$= \underline{\underline{(d+6)\{c+4\}}}$$

$$40) 6y^2 + 7y + 24y + 28$$

$$= 6y^2 + 24y + 7y + 28$$

$$= \{6y(y+4) + 7(y+4)\}$$

$$= \underline{\underline{(y+4)\{6y+7\}}}$$

$$\begin{aligned}
 42) & pq - 10p + 8q - 80 \\
 &= \{p(q-10) + 8(p-10)\} \\
 &= \underline{\underline{(q-10)\{p+8\}}}
 \end{aligned}$$

$$\begin{aligned}
 44) & x^2 - x + 4x - 4 \\
 &= \{x(x-1) + 4(x-1)\} \\
 &= \underline{\underline{(x-1)\{x+4\}}}
 \end{aligned}$$

$$\begin{aligned}
 46) & 16q^2 + 20q - 28q - 35 \\
 &= \{4q(4q+5) - 7(4q+5)\} \\
 &= \underline{\underline{(4q+5)\{4q-7\}}}
 \end{aligned}$$

$$\begin{aligned}
 48) & n^2 - 3n - n + 3 \\
 &= \{n(n-3) - 1(n-3)\} \\
 &= \underline{\underline{(n-3)\{n-1\}}}
 \end{aligned}$$

$$\begin{aligned}
 50) & 4x^2 - 36x - 3x + 27 \\
 &= \{4x(x-9) - 3(x-9)\} \\
 &= \underline{\underline{(x-9)\{4x-3\}}}
 \end{aligned}$$

$$\begin{aligned}
 52) & -4x^3y^5 - x^2y^3 + 12xy^4 \\
 &= \underline{\underline{-xy^3(4x^2y^2 + x - 12y)}}
 \end{aligned}$$

$$\begin{aligned}
 54) & x^3 + x^2 + x + 1 \\
 &= \{x^2(x+1) + 1(x+1)\} \\
 &= \underline{\underline{(x+1)\{x^2+1\}}}
 \end{aligned}$$

$$\begin{aligned}
 56) & 5x^3 - 3x^2 + 5x - 3 \\
 &= \{x^2(5x-3) + 1(5x-3)\} \\
 &= \underline{\underline{(5x-3)\{x^2+1\}}}
 \end{aligned}$$