

解答

1. (1)  $\frac{40}{21}$                       (2)  $\frac{7}{3}$                       (3)  $-\frac{9}{4}$                       (4)  $\frac{2}{3}$
2. (1)  $6x + 4$                       (2)  $4t - 5$                       (3)  $\frac{5}{3}x + \frac{8}{3}$                       (4)  $\frac{5}{6}x + 2y$
3. (1)  $6u^2 + 9u$                       (2)  $2x^2 - x - 6$                       (3)  $x^2 - xy - 2y^2$                       (4)  $4x^2 - y^2 + 4x + 1$
4. (1)  $b(ab + 3)$                       (2)  $(x + 3)(x - 3)$                       (3)  $(t + 3)^2$   
 (4)  $(x + 2)(x - 3)$                       (5)  $(x - 2)(2x + 1)$                       (6)  $(x + 2)(3x + 2)$

解説

1. (1) 与式  $= \frac{49}{21} - \frac{9}{21} = \frac{40}{21}$                       (2) 与式  $= \frac{25}{9} - \frac{4}{9} = \frac{21}{9} = \frac{7}{3}$   
 (3) 与式  $= -\frac{5}{2} + \frac{1}{4} = -\frac{10}{4} + \frac{1}{4} = -\frac{9}{4}$   
 (4) 与式  $= \frac{3 \times 2}{5 \times 1} - \frac{8}{15} = \frac{6}{5} - \frac{8}{15} = \frac{18}{15} - \frac{8}{15} = \frac{10}{15} = \frac{2}{3}$
2. (1) 与式  $= 5x + 5 + x - 1 = 6x + 4$                       (2) 与式  $= 6t - 3 - 2t - 2 = 4t - 5$   
 (3) 与式  $= \frac{3}{3}x + \frac{3}{3} + \frac{2}{3}x + \frac{5}{3} = \frac{5}{3}x + \frac{8}{3}$                       (4) 与式  $= \frac{9}{6}x + y - \frac{4}{6}x + y = \frac{5}{6}x + 2y$
3. (1) 与式  $= 4u \times \frac{3}{2}u + 6 \times \frac{3}{2}u = 6u^2 + 9u$                       (2) 与式  $= 2x^2 + 3x - 4x - 6 = 2x^2 - x - 6$   
 (3) 与式  $= x^2 - 2xy + xy - 2y^2 = x^2 - xy - 2y^2$   
 (4) 公式  $(a + b)(a - b) = a^2 - b^2$  より  
 与式  $= \{(2x + 1) + y\}\{(2x + 1) - y\} = (2x + 1)^2 - y^2 = 4x^2 + 4x + 1 - y^2 = 4x^2 - y^2 + 4x + 1$
4. (1) 与式  $= ab \times b + 3 \times b = b(ab + 3)$   
 (2) 公式  $a^2 - b^2 = (a + b)(a - b)$  より 与式  $= x^2 - 3^2 = (x + 3)(x - 3)$   
 (3) 公式  $a^2 + 2ab + b^2 = (a + b)^2$  より 与式  $= t^2 + 2 \times t \times 3 + 3^2 = (t + 3)^2$   
 (4) 公式  $x^2 + (a + b)x + ab = (x + a)(x + b)$  より 与式  $= x^2 + \{2 + (-3)\}x + 2 \times (-3) = (x + 2)(x - 3)$
- (5) たすき掛け  $\begin{array}{r} 1 \quad \times \quad -2 \quad \rightarrow \quad -4 \\ 2 \quad \times \quad 1 \quad \rightarrow \quad 2 \\ \hline 2 \quad \quad -2 \quad \quad -3 \end{array}$  より 与式  $= (x - 2)(2x + 1)$
- (6) たすき掛け  $\begin{array}{r} 1 \quad \times \quad 2 \quad \rightarrow \quad 2 \\ 3 \quad \times \quad 2 \quad \rightarrow \quad 6 \\ \hline 3 \quad \quad 4 \quad \quad 8 \end{array}$  より 与式  $= (x + 2)(3x + 2)$