

- ② $\frac{1}{4}$ ④ $\frac{12}{35}$ ⑥ $\frac{3}{2}$ ⑧ $\frac{1}{14}$ ⑳ $6y^2$ ㉒ $x^2 - 2x$ ㉔ $x^2 + 8x + 15$
 ㉖ $x^3 + 4x^2 - 3x - 18$ ㉘ $\frac{25}{3y^2}$ ㉚ $\frac{y}{2}$ ㉜ $\frac{x+3}{x-4}$ ㉞ $\frac{y^2 - 3y}{y-7}$

SOLUTIONS

② $\frac{17}{32} - \frac{9}{32} = \frac{8}{32} = \frac{1}{4}$ ④ $\frac{3^3 \cdot 20^4}{5 \cdot 2^5 \cdot 7 \cdot 7} = \frac{12}{35}$ ⑥ $\frac{9}{4} \div \frac{15}{10} = \frac{3 \cdot 9}{2 \cdot 4} \cdot \frac{10^5}{15 \cdot 5} = \frac{15}{10} = \frac{3}{2}$

⑧ $\frac{351}{356} + \frac{66}{356} - \frac{4^{14}}{15^{14}} = \frac{35}{210} + \frac{36}{210} - \frac{56}{210} = \frac{15}{210} = \frac{1}{14}$ ⑳ $\frac{5 \cdot 3y}{2y \cdot 3y} = \frac{15y}{6y^2} \Rightarrow ? = 6y^2$
 LCD: $\frac{6}{2 \cdot 3} \cdot \frac{35}{5 \cdot 7} \cdot \frac{15}{3 \cdot 5} \Rightarrow 2 \cdot 3 \cdot 5 \cdot 7 = 210$

㉒ $\frac{x}{x+2} = \frac{?}{x^2-4} \Rightarrow \frac{x}{x+2} = \frac{?}{(x+2)(x-2)} \Rightarrow ? = x(x-2) = x^2 - 2x$

㉔ $\frac{x-4}{x+5} = \frac{?}{(x+5)(x+3)} \Rightarrow ? = (x-4)(x+3) = x^2 + 8x + 15$

㉖ $\frac{?}{(x+3)(x-3)} = \frac{(x+3)(x-2)}{(x-3)} \Rightarrow ? = (x+3)(x+3)(x-2) = (x^2 + 6x + 9)(x-2)$
 $= x^3 - 2x^2 + 6x^2 - 12x + 9x - 18 = x^3 + 4x^2 - 3x - 18$

㉘ $\frac{75y^2}{9y^4} = \frac{25}{3y^2}$ ㉚ $\frac{2y^2 + 6y}{4y + 12} = \frac{2y(y+3)}{2 \cdot 4(y+3)} = \frac{y}{2}$ ㉜ $\frac{(x+3)(x+3)}{(x-4)(x+3)} = \frac{x+3}{x-4}$

㉞ $\frac{y(y^2 + 4y - 21)}{(y+7)(y-7)} = \frac{y(y+7)(y-3)}{(y+7)(y-7)}$

