

④  $\frac{x-4}{x^2+6x+8} + \frac{x-1}{x^2-4}$  (PSD) (PSD)

$$\frac{x-4}{(x+2)(x+4)} + \frac{x-1}{(x+2)(x-2)}$$

$$\frac{x^2-6x+8}{(x+2)(x+4)(x-2)} + \frac{x^2+3x-4}{(x+2)(x+4)(x-2)}$$

KEY#  $\frac{2x^2-3x+4}{(x+2)(x+4)(x-2)}$

$$\frac{(x-4)(x-2)}{(x+2)(x+4)(x-2)} + \frac{(x-1)(x+4)}{(x+2)(x+4)(x-2)}$$

$$\frac{x^2-2x-4x+8}{(x+2)(x+4)(x-2)} + \frac{x^2+4x-x-4}{(x+2)(x+4)(x-2)}$$

⑤  $\frac{y+3}{4y^2-21y+5} - \frac{1}{4y^2-17y+4}$  (KEY#) (KEY#)

$$\frac{y+3}{(4y-1)(y-5)} - \frac{1}{(4y-1)(y-4)}$$

$$\frac{(y+3)(y-4)}{(4y-1)(y-5)(y-4)} - \frac{1(y-5)}{(4y-1)(y-5)(y-4)}$$

$$\frac{y^2-4y+3y-12}{(4y-1)(y-5)(y-4)} - \frac{y-5}{(4y-1)(y-5)(y-4)}$$

$$\frac{y^2-y-12}{(4y-1)(y-5)(y-4)} - \frac{y-5}{(4y-1)(y-5)(y-4)}$$

$$\frac{y^2-y-12-y+5}{(4y-1)(y-5)(y-4)}$$

KEY#  $\frac{y^2-2y-7}{(4y-1)(y-5)(y-4)}$

⑥  $\frac{x-2}{x^2-1} - \frac{x+3}{x^2+3x+2} + \frac{3}{x^2+x-2}$  (PSD) (PSD) (PSD)

$$\frac{x-2}{(x+1)(x-1)} - \frac{x+3}{(x+1)(x+2)} + \frac{3}{(x+2)(x-1)}$$

$$\frac{(x-2)(x+2)}{(x+1)(x-1)(x+2)} - \frac{(x+3)(x-1)}{(x+1)(x-1)(x+2)} + \frac{3(x+1)}{(x+1)(x-1)(x+2)}$$

$$\frac{x^2-4}{(x+1)(x-1)(x+2)} - \frac{x^2+2x-3}{(x+1)(x-1)(x+2)} + \frac{3x+3}{(x+1)(x-1)(x+2)}$$

$$\frac{x^2-4-x^2-2x+3+3x+3}{(x+1)(x-1)(x+2)}$$

$$\frac{x+2}{(x+1)(x-1)(x+2)}$$

KEY#  $\frac{1}{(x+1)(x-1)}$