① $\frac{x^2-25}{x^2+2x-15} \div \frac{15+2x-x^2}{9-x^2}$

$\frac{x^2-25}{x^2+2x-15} \times \frac{-(x^2-9)}{-(x^2-2x-15)}$

$\frac{(x+5)(x-5)}{(x+5)(x-3)} \times \frac{(x+3)(x-3)}{(x-5)(x+3)} = 1$

② $\frac{x+5}{x^2+10x+25} - \frac{x+3}{x^2+6x+9}$

$\frac{(x+5)}{(x+5)(x+5)} - \frac{(x+3)}{(x+3)(x+3)}$

$\frac{1}{x+5} - \frac{1}{x+3}$

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

$\frac{x+3-x-5}{(x+5)(x+3)}$

$\frac{-2}{(x+5)(x+3)}$

③ $\frac{x}{x+9} + \frac{3x+27}{x^2+18x+81}$

$\frac{x}{x+9} + \frac{3(x+9)}{(x+9)(x+9)}$

$\frac{x}{x+9} + \frac{3}{x+9}$

$\frac{x+3}{x+9}$

(4) $\frac{x^2-6x+8}{3x^2-3} \cdot \frac{6x^2-15x+9}{x^2-4} \div \frac{x^2-2x-8}{3}$

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

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

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

(5) $\frac{3x^2+8x-3}{x^2+x-6} \div \frac{2x+1}{x-2}$

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

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

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

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

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

$\frac{x-10}{(x+2)(x-2)}$

(7) $\frac{2x^2-50}{x^2-3x} \cdot \frac{x-3}{4x-20}$

$\frac{2(x^2-25)}{x(x-3)} \cdot \frac{x-3}{4(x-5)}$

$\frac{2(x+5)(x-5)}{x(x-3)} \cdot \frac{(x-3)}{4(x-5)}$

$\frac{x+5}{2x}$