(6)

$$\frac{5x^2-9x+2}{x^2-15x+50} - \frac{4x^2-2x+32}{x^2-15x+50}$$

$$\frac{5x^2-9x+2-4x^2+2x-32}{x^2-15x+50}$$

$$\frac{x^2-7x-30}{x^2-15x+50} \quad \text{PSD} \quad \text{PSD}$$

$$\frac{(x-10)(x+3)}{(x-10)(x-5)}$$

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

(7)

$$\frac{x^2-7x}{x^2-9} + \frac{24-12x}{9-x^2}$$

$$\frac{x^2-7x}{x^2-9} + \frac{24-12x}{-x^2+9}$$

$$\frac{x^2-7x}{x^2-9} + \frac{24-12x}{(-1)(x^2-9)}$$

$$\frac{x^2-7x}{x^2-9} - \frac{24-12x}{x^2-9}$$

$$\frac{x^2-7x-24+12x}{x^2-9}$$

$$\frac{x^2+5x-24}{x^2-9} \quad \text{PSD} \quad \text{DNE}$$

$$\frac{(x+8)(x-3)}{(x+3)(x-3)}$$

$$\frac{x+8}{x+3}$$