

$$1) \frac{5a+5b}{8a} \cdot \frac{8}{a+b} = \frac{\cancel{5}(a+b)}{\cancel{8}(a+b)} = \frac{5}{8}$$

$$2) \frac{y}{x-y} \cdot \frac{y}{x^2-y^2} = \frac{\cancel{y}}{\cancel{x-y}} \cdot \frac{(x-y)(x+y)}{\cancel{y}} = x+y$$

$$3) \frac{a^2-b^2}{a} \cdot \frac{2a+2b}{a} = \frac{(a-b)(a+b)}{\cancel{a}} \cdot \frac{\cancel{2}}{2(a+b)} = \frac{a-b}{2}$$

$$4) \left(\frac{3}{y-2} - \frac{1}{y-2} \right) \cdot \frac{y^2-2^2}{4} = \frac{\cancel{2}}{\cancel{y-2}} \cdot \frac{(y-2)(y+2)}{\cancel{4}2} = \frac{y+2}{2}$$

$$5) \left(\frac{3}{a+5} + \frac{a-3}{a+5} \right) \cdot \frac{a+5}{a^2} = \frac{\cancel{a}}{\cancel{a+5}} \cdot \frac{\cancel{a+5}}{a^2} = \frac{1}{a}$$