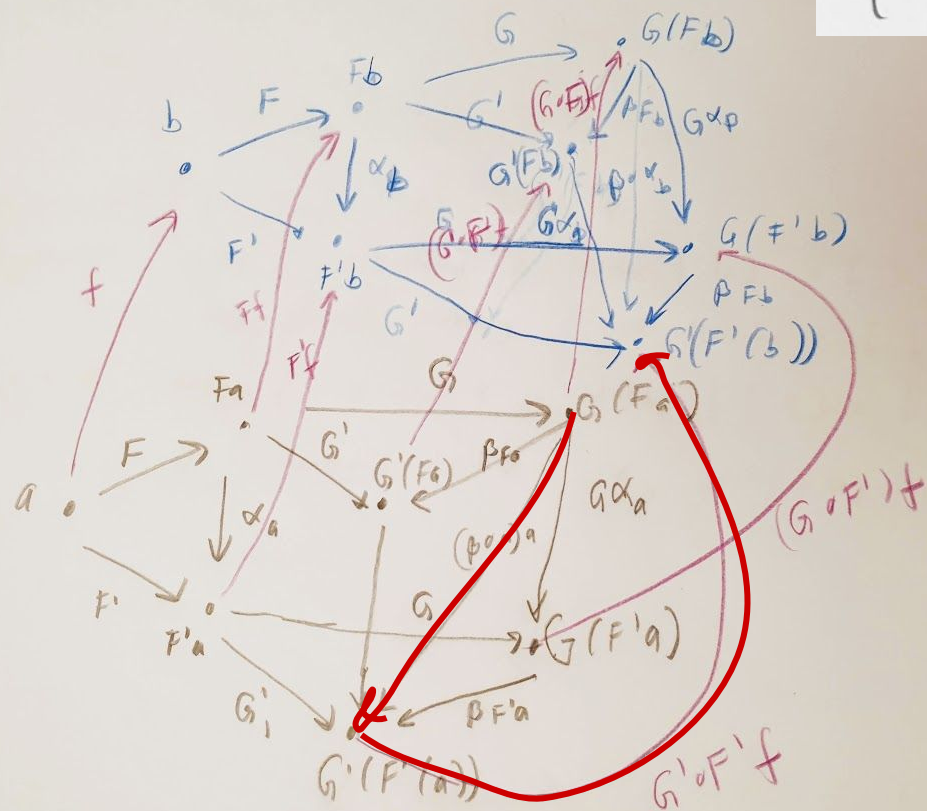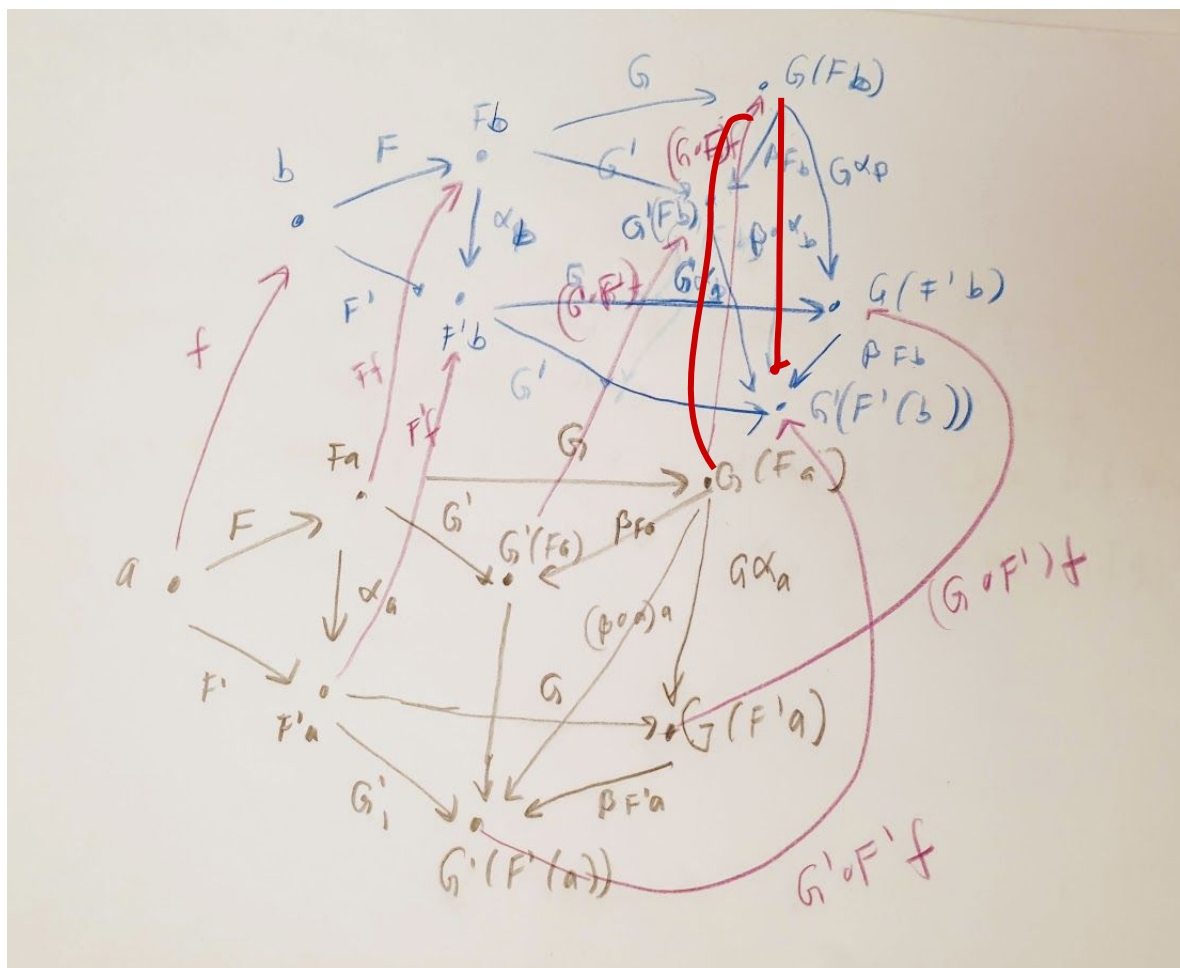# Oppgave 4

$$\beta \circ \alpha : G(Fa) \to G'(F'a)$$

vise at $\quad (G' \circ F')f \circ (\beta \circ \alpha)_a = (\beta \circ \alpha)_b (G \circ F)f$

$$(G' \circ F')f \circ (\beta \circ \alpha)_a$$

$$(\beta \circ \alpha)_b \, (G \circ F)_f$$

G(Fb)

$G$ $Fb$ $F$ $b$

$G'$ $(G \circ F)b$ $\alpha Fb$ $G\alpha_b$

$G'(Fb)$ $\alpha_b$

$G\alpha_a$ $\beta_{Fb}$ $\nu_b$

$(G \circ F)f$ $G'\alpha_a$

$F'$ $F'b$ $G(F'b)$

$Ff$ $G'$ $\beta_{Fb}$ $G'(F'(b))$

$F'f$ $G(F'f)$

$Fa$ $G$ $G(Fa)$

$F$ $G'$ $G'(Fa)$ $\beta_{Fa}$

$a$ $G\alpha_a$ $(G \circ F')f$

$\alpha_a$ $(\beta \circ \alpha)_a$

$F'$ $G$ $G(F'a)$

$F'a$ $\beta_{F'a}$

$G'_1$ $G'(F'(a))$ $G' \circ F' f$