$$R_1 = \uparrow a \cdot \uparrow b = 0 \quad \forall t$$

$$R_2 = \uparrow a \cdot \uparrow (a,b) \neq 0$$

$$R_3 = \uparrow (a,b) \cdot \uparrow (a,c) \neq 0$$

$$R_u = \uparrow b \cdot \uparrow (a,c)$$