

$$\begin{aligned} \underline{\text{fun } g \text{ True } 1} &= g \left( \text{fun } (g.g) \text{ True } (-1) \right) \\ &= g \ 1 \end{aligned}$$

$$\begin{aligned} \text{fun } g \text{ False } 1 &= g \left( \text{fun } (g.g) \text{ True } (-1) \right) \\ &= g \ 1 \end{aligned}$$

$$\text{fun } g \text{ True } 2 = \text{fun } (\text{fun } g \text{ True}) \text{ False } (g \ 1)$$


---

$$\begin{aligned} \boxed{\text{fun } id \text{ True } 2} &= \text{fun } (\text{fun } id \text{ True}) \text{ False } 1 \\ &= \text{fun } id \text{ True } 1 \\ &= id \ 1 \\ &= 1 \end{aligned}$$