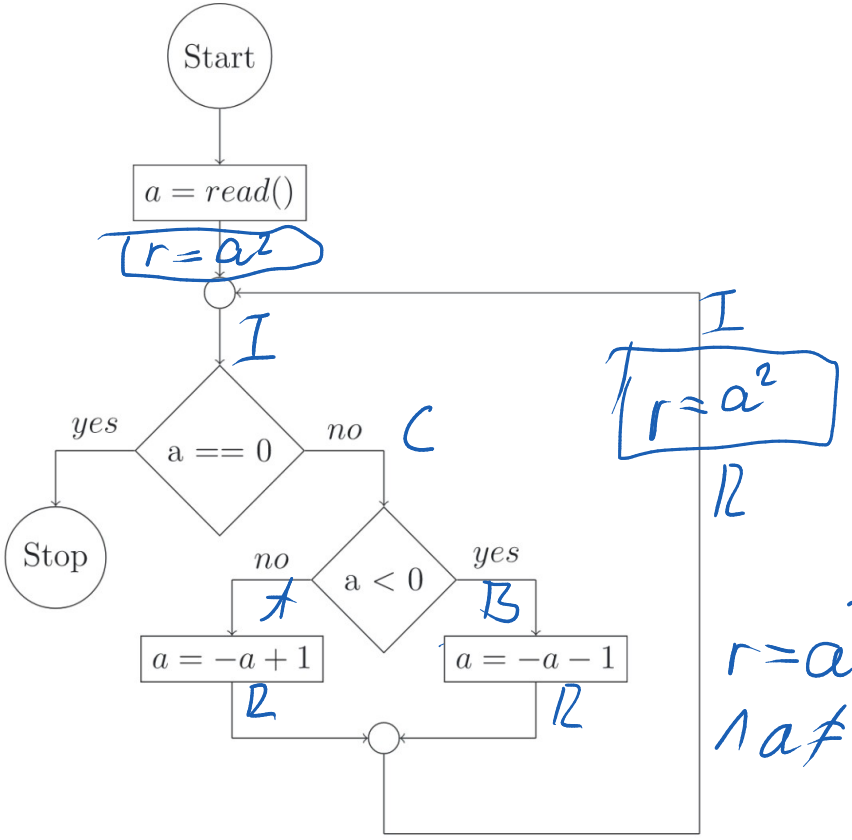
Prove termination of the following program



$I :\equiv r = a^2$

$R :\equiv r > a^2$

$A :\equiv r > (-a+1)^2 \equiv r > a^2 - 2a + 1$

$B :\equiv r > (-a-1)^2 \equiv r > a^2 + 2a + 1$

$C :\equiv \big((a < 0 \wedge r > a^2 + 2a + 1) \vee (a \geq 0 \wedge r > a^2 - 2a + 1)\big) \wedge r > 0$

2. ✓