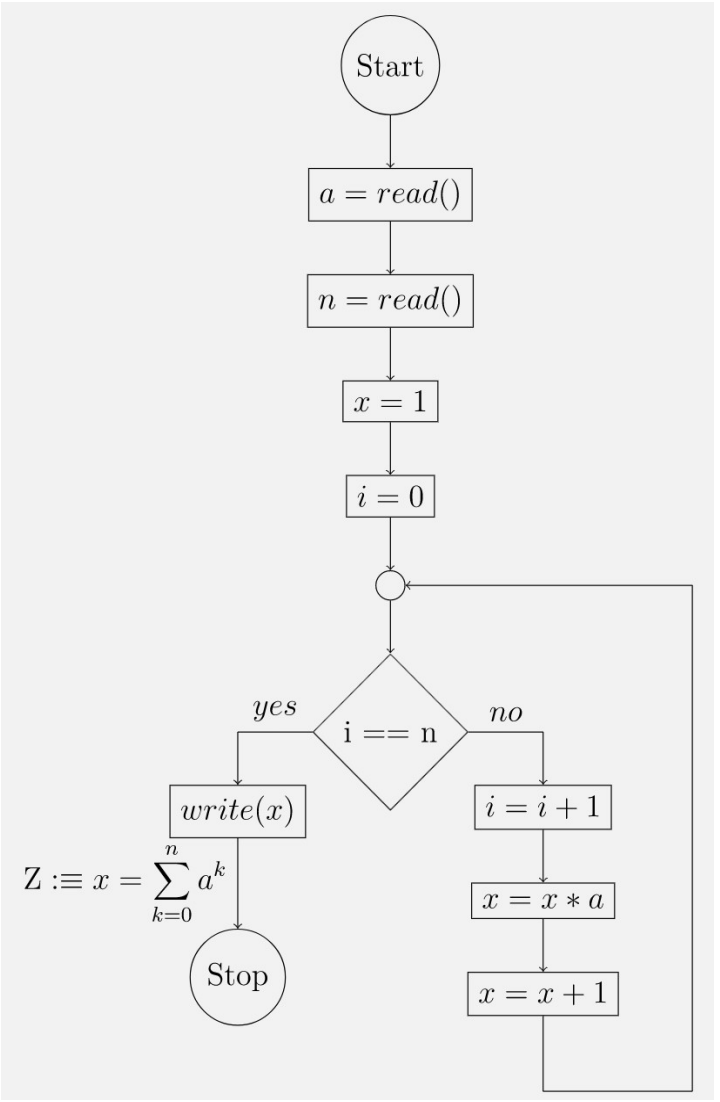
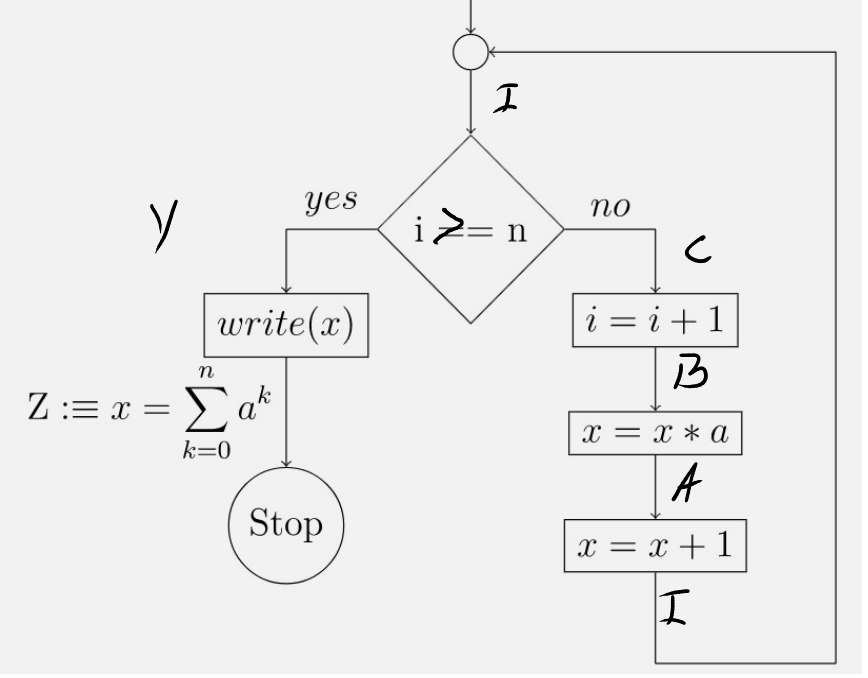

Start
$a = read()$
$n = read()$
$x = 1$
$i = 0$
yes
i == n
no
$write(x)$
$i = i + 1$
$x = x * a$
$x = x + 1$
Stop
$Z :\equiv x = \sum_{k=0}^{n} a^k$



y

c

$I \equiv x = \sum_{k=0}^{i} a^k \quad \wedge \quad i \geq 0 \qquad i \leq n$

$A \equiv wp[\![x = x+1]\!](I) \equiv x+1 = \sum_{k=0}^{i} a^k \quad \wedge \; i \geq 0$

$B \equiv wp[\![x = x \cdot a]\!](A) \equiv ax+1 = \sum_{k=0}^{i} a^k \quad \wedge \; i \geq 0$

$C \equiv wp[\![i = i+1]\!](B) \equiv$

$ax+1 = \sum_{k=0}^{i+1} a^k \quad \wedge \; i+1 \geq 0$

$\equiv x = \sum_{k=0}^{i} a^k \quad \wedge \; i+1 \geq 0$

Prüfen auf LC

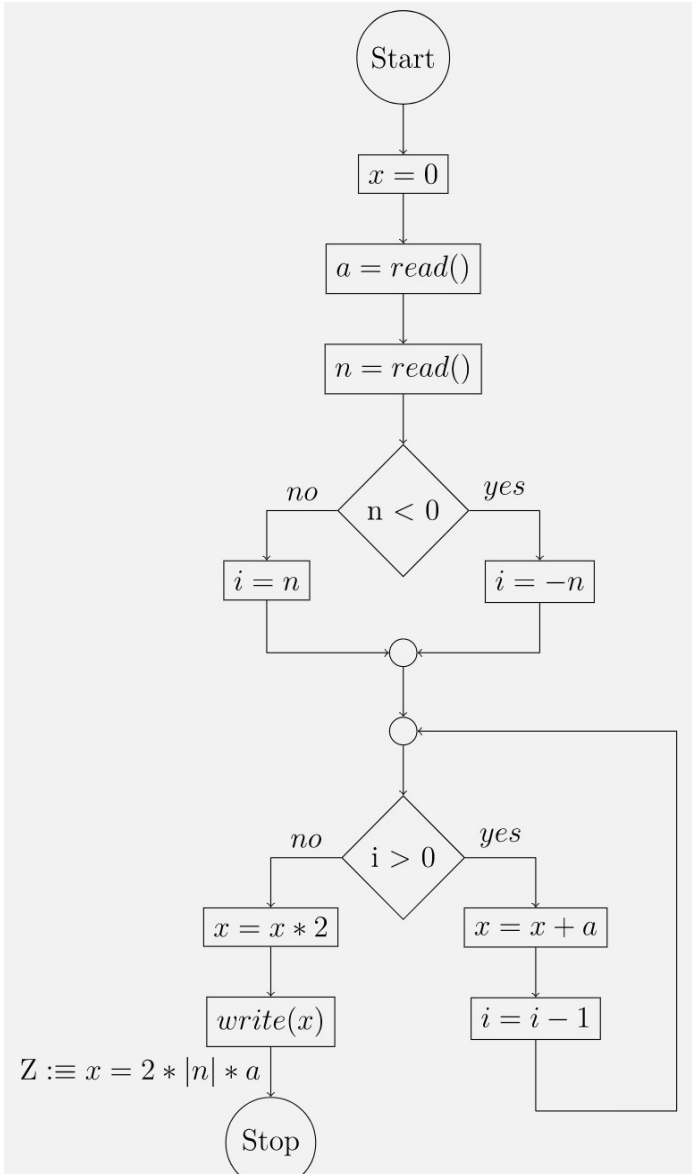
$x = \sum_{k=0}^{i} a^k \quad \wedge \quad i \geq 0 \quad \wedge \quad i \neq n \quad \Longrightarrow \quad x = \sum_{k=0}^{i} a^k \quad \wedge \; i+1 \geq 0$

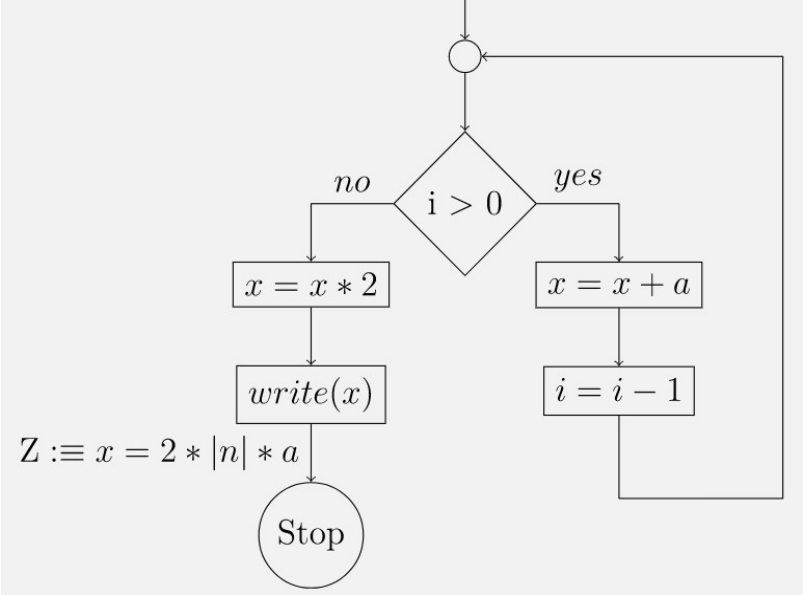
gilt

$i \geq n$

$$x = \sum_{k=0}^{i} a^k \quad \wedge \quad i \geq 0 \quad \wedge \quad i = n \Rightarrow x = \sum_{k=0}^{n} a^k$$

gilt


Start
$x = 0$
$a = read()$
$n = read()$
no
n < 0
yes
$i = n$
$i = -n$
no
i > 0
yes
$x = x * 2$
$x = x + a$
$write(x)$
$i = i - 1$
Z :≡ $x = 2 * |n| * a$
Stop


no
i > 0
yes
$x = x * 2$
$x = x + a$
$write(x)$
$i = i - 1$
Z :≡ $x = 2 * |n| * a$
Stop