Algorithm 1 Calculate $y = x^n$

1: $y \leftarrow 1$
2: **if** $n < 0$
3:     $X \leftarrow 1/x$
4: **end if**
5: **if** $n > 0$ **then**
6:     $X \leftarrow 1$
7: **end if**
8: **for** $N \neq 0$
9:     $X \leftarrow X \times X$
10: **end for**
11: **while** $N \neq 0$ **do**
12:     $X \leftarrow X \times X$
13: **end while**