I want to create a SHA256 hasher in Circom so I can validate that a person knows the pre-image of a SHA256 hash without revealing the pre-image. This is my current code but it doesn't work:

include "/node\_modules/circomlib/circuits/sha256/sha256.circom"

template SHAHasher(nBits) { signal input bits[nBits]; signal output newHash[256];

component shaHash = Sha256(nBits);

for (var i=0; i<nBits; i++) { shaHash.in[i] <== bits[i]; }

for (var i=0; i<256; i++) { newHash[i] <== shaHash.out[i]; } }