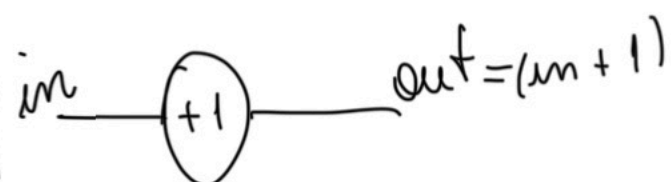


Hand2Tetris
"Overflow is neither detected nor handled"

Incrementer: special purpose chip dedicated to add the constant 1 to a given number.



b + c
+ c

```
Out01);  
= OutSum0);  
OutCarry0);  
Out11);  
= OutSum0Inversed);  
OutSum1);  
utCarry1);  
a, out= sum);  
el= a, out= carry);
```

```
9 CHIP Inc16 {  
10   IN in[16];  
11   OUT out[16];  
12  
13   PARTS:  
14   HalfAdder(a= in[0], b= true, sum= out[0], carry= carry0);  
15   FullAdder(a= in[1], b= false, c= carry0, sum= out[1], carry= carry1);  
16   FullAdder(a= in[2], b= false, c= carry1, sum= out[2], carry= carry2);  
17   FullAdder(a= in[3], b= false, c= carry2, sum= out[3], carry= carry3);  
18   FullAdder(a= in[4], b= false, c= carry3, sum= out[4], carry= carry4);  
19   FullAdder(a= in[5], b= false, c= carry4, sum= out[5], carry= carry5);  
20   FullAdder(a= in[6], b= false, c= carry5, sum= out[6], carry= carry6);  
21   FullAdder(a= in[7], b= false, c= carry6, sum= out[7], carry= carry7);  
22   FullAdder(a= in[8], b= false, c= carry7, sum= out[8], carry= carry8);  
23   FullAdder(a= in[9], b= false, c= carry8, sum= out[9], carry= carry9);  
24   FullAdder(a= in[10], b= false, c= carry9, sum= out[10], carry= carry10);  
25   FullAdder(a= in[11], b= false, c= carry10, sum= out[11], carry= carry11);  
26   FullAdder(a= in[12], b= false, c= carry11, sum= out[12], carry= carry12);  
27   FullAdder(a= in[13], b= false, c= carry12, sum= out[13], carry= carry13);  
28   FullAdder(a= in[14], b= false, c= carry13, sum= out[14], carry= carry14);  
29   FullAdder(a= in[15], b= false, c= carry14, sum= out[15], carry= carry15);  
30 }
```

