I spent 30 min on this assignment.

```
//a)
  //@ assert 2*y + 3 == 13;
x = 2*y + 3;
  //@ assert x == 13;

//b

  //@ assert x + y < 2*y;
x' = x + y;
  //@ assert x' < 2*y;

//c
  //@ assert j + 1 > 0;
j' = j + 1;
  //@ assert j' > 0;

//d
  //@ assert i + 1 <= n;
i' = i + 1;
  //@ assert i' <= n;

//e
  //@ assert a - b > b;
a' = a - b;
  //@ assert a' > b;

//f
  //@ assert (z - 3) * z > 0;
x = z - 3;
  //@ assert x * z > 0;
y = x * z;
  //@ assert y > 0;

//g
  //@ assert ((a > b) ==> (a - b > 0 && b > 0)) && ((a <=
  //b) ==> (a > 0 && b - a > 0));
if (a > b) {
  //@assert a > b;
  //@assert a - b > 0 && b > 0;
  a = a - b;
  //@ assert a > 0 && b > 0;
} else {
  //@assert a <= b;
  //@assert a > 0 && b - a > 0;
  b = b - a;
  //@ assert a > 0 && b > 0;
}
  //@ assert a > 0 && b > 0;

//h
```

```
  //@ assert true;
if (i > 0) {
  //@ assert true && i > 0;
  //@ assert i == Math.abs(i);
  a = i;
  //@ assert a == Math.abs(i);
}
  //@ assert a == Math.abs(i);
```