

# Programmierung WS 18

## Hausaufgaben - Blatt 1

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### HA 2

a)

i)

### HA 4

CODE

### HA 6

```
< x ≥ 0 >
< x ≥ 0 ∧ -x ≤ 0 ∧ -x = -x ∧ x = x >
  res = -x;
< x ≥ 0 ∧ res ≤ 0 ∧ res = -x ∧ x = x >
  c = x;
< x ≥ 0 ∧ res ≤ 0 ∧ res = -x ∧ c = x >
< res = -x + ∑k=xc+1 2k ∧ c ≥ 0 >
  while(c > 0)
    < res = -x + ∑k=xc+1 2k ∧ c ≥ 0 ∧ c > 0 >
    < res + 2 * c = -x + ∑k=xc-1+1 2k ∧ c - 1 ≥ 0 >
    res = res + 2 * c;
    < res = -x + ∑k=xc-1+1 2k ∧ c - 1 ≥ 0 >
    c = c - 1;
    < res = -x + ∑k=xc+1 2k ∧ c ≥ 0 >
  }
< res = -x + ∑k=xc+1 2k ∧ c ≥ 0 ∧ ¬(c > 0) >
< res = -x + ∑k=x1 2k >
```