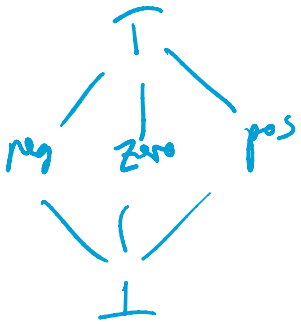
Sign Analysis Example 1

Thursday, January 11, 2024 2:59 AM

```
fn foo(p:int) -> int {
  let x:int = -2, y:int = 2;

  if p < x {
      p = -p;
      x = -x;
  }
  else if p > y {
      p = p + y;
  }

  return x + y;
}
```




```
fn foo(p:int) -> int {
  let _t1:int, _t2:int, _t3:int, _t4:int,
_t5:int, _t6:int, _t7:int, x:int, y:int

  entry:
    _t1 = $arith sub 0 2
    x = $copy _t1
    y = $copy 2
    _t2 = $cmp lt p x
    $branch _t2 bb2 bb3

  bb1:
    _t7 = $arith add x y
    $ret _t7

  bb2:
    _t3 = $arith sub 0 p
    p = $copy _t3
    _t4 = $arith sub 0 x
    x = $copy _t4
    $jump bb1

  bb3:
    _t5 = $cmp gt p y
    $branch _t5 bb5 bb4

  bb4:
    $jump bb1

  bb5:
    _t6 = $arith add p y
    p = $copy _t6
    $jump bb4
  }
```