Space, S: int x,y;

P1:

is not equal to . Therefore P1 is not correct with respect to R.

However, . Therefor P1 is partially correct with respect to R. Since it is partially correct but not totally correct, it is certainly not defined.

Space, S: int x,y;

P2:

Rule:

If the premises are valid, then so is the conclusion

If we want postcondition q(s) to hold after execution of the assignment [s=E(s)] what condition do you want to hold prior to the assignment?

{ 4 < x+5 < 18 } x=x+5 { 4<x<18 }

{x=1} x=x+1 {x=2}

P: x=1, q: x=2, E: x=1

We must prove: x=1 🡺 x+1=2

If we want to prove {x=1} x=x+1 {x=2} we must prove x=1 🡺 (x+1)=2

To prove

{x=1} x=x+1 {x≥1}

We must prove (x=1) 🡺 (x+1≥1)

{x>3} x=x\*x {x>9}

x>3 🡺 x\*x>9.

{x+y=A} x=x+1; **{ int }** y=y-1 {x+y=A}

int : x+y=A+1

we must prove two formulas

{x+y=A} x=x+1 {x+y=A+ 1}

**x+y=A 🡺 (x+1)+y = A+1**

{x+y=A+1} y = y-1 {x+y=A}

**x+y=A+1 🡺 (x+(y-1))=A**