|  |  |  |
| --- | --- | --- |
| **11** | GreaterThan (x: R, y: R) r: B  Pre: true  Post:  (r = True (x > y)) (r = False (x y)) | GreaterThan (R x R) bool  GreaterThan (x, y) |
| **12** | Maximum (x:R, y: R, z: R) r: R  Pre: true  Post: | Maximum (R x R x R) Z  Maximum (x,y,z) |
| **13** | MaxPrime (n: N1) r: N1  Pre: true  Post ) (is\_prime(k)) | MaxPrime (N1) r: N1 {-1}  MaxPrime (n) if (n = 1) -1 else if (is\_prime(n-1) = True) (n-1) else MaxPrime(n-1) |
| **14** | IsLeapYear (n: N1) r: B  Pre  Post  ((r = true) ((n mod 400 = 0) (if n mod 4 = 0 n mod 100 0)))  (r = false) | IsLeapYear (N1) B  IsLeapYear (n) if ((n mod 400 = 0) (if n mod 4 = 0 n mod 100 0)) true else false |
| **15** | DayInYear (d: N1, m: N1, y: N1) r: N1  Pre (d < DayInMonth(m,y)) (m < 12)  Post (r = k) ^ (k = d + sum(DayInMonth(i, y) i 1..m-1) | DayInYear (N1 x N1 x N1) N1  DayInYear (d, m, y: N1)  Let r = d in  If d < DayInMonth(m,y)) (m < 12)) r: 0  Else if (DayInMonth(m-1, y) = -1) r = r + DayInMonth(m-1, y) |
| **16** | DayInMonth (m: N, y: N) r: N\*  Pre: m < 12  Post: ? | DayInMonth (N1 x N1) N1  DayInMonth (m, y)  cases m: (  1, 3, 5, 7, 8, 10, 12 31,  4, 6, 9, 11 30,  2 if IsLeapYear(y) then 29 else 28 |
| **17** |  |  |
| **18** | MiliToMeter (m: R) r: R  Pre: true  Post: r = t R | t\*1000 = m | MiliToMeter R R  MiliToMeter (m) m / 1000 |
| **19** | OpeMod (a: N, b: N) r: N  Pre: b > 0  Post: (r = t) ( | OpeMod N x N B  OpeMod (a, b) a mod b |
| **20** | OpeSqrt(a: R) r: R  Pre: a 0  Post: r = t | OpeSqrt R R  OpeSqrt sqrt(abs(a)) |
| **21** | CheckArrayPositive (a: Z\*) r: B  Pre a []  Post ((r = true) ( | x elem(a) = true x 0)) (r = false) | CheckArrayPositive (a: Z\*) r: B  CheckArrayPositive (a) let x = head(a) in if (len(a) > 0 x 0) true else if (len(a) = 0) false else CheckArrayPositive(tail(a))) |
| **22** | Sum (a: R\*) r: R  Pre a []  Post ((r = x) (a=[x])) ((r = r + x + Sum(a\x)) len(a) > 1) | Sum (a: R\*) r: R  Sum (a) r = 0  if (len(a) 0) r else r = head(a) + sum(tail(a)) |