```
IntegerPredicates (Int): trait
  % Frequently used subranges of the integers
  assumes Integer
  introduces
    InRange: Int, Int, Int → Bool
    Natural, Positive, Signed, Unsigned: Int → Bool
    maxSigned, maxUnsigned: → Int
  asserts ∀ n, low, high: Int
    InRange(n, low, high) == low ≤ n ∧ n ≤ high;
    Natural(n) == n ≥ 0;
    Positive(n) == n > 0;
    Signed(n) ==
      InRange(n, -succ(maxSigned), maxSigned);
    Unsigned(n) == InRange(n, 0, maxUnsigned)
  implies ∀ n: Int
    Positive(n) ⇒ Natural(n);
    Unsigned(n) ⇒ Natural(n)
```