1. (a)

```plaintext
br test
top:  s
test:  evaluate e into t
cmp t, true
breq top
```

(b)

```plaintext
top:  s
test:  evaluate e into t
cmp t, true
brneq top
```

2. Here is one solution.

```plaintext
t := e
u := t - 13
ifsign u
  <: w := t - 4
    ifsign w
      <: x := t - 2
        ifsign x
          <: br def
            =: s2
          >: br def
      =: s4
  >: x := t - 12
    ifsign x
      <: br def
        =: s12
      >: br def
    =: s13
  >: w := t - 88
    ifsign w
      <: x := t - 17
        ifsign x
          <: br def
            =: s17
          >: br def
```

3. Here is one solution. (This code actually compiles in Scala; yours need not.)

class RangeIterator(val r: Range) extends Iterator[Int] {
  var n = r.start
  def hasNext() : Boolean = n <= r.end
  def next() : Int = { 
    val v = n
    n += 1
    v
  }
}