

```

chan values[n](int smallest, int largest);
process P[0] { # initiates the exchanges
  int v; # assume v has been initialized
  int smallest = v, largest = v; # initial state
  # send v to next process, P[1]
  send values[1](smallest, largest);
  # get global smallest and largest from P[n-1] and
  # pass them on to P[1]
  receive values[0](smallest, largest);
  send values[1](smallest, largest);
}
process P[i = 1 to n-1] {
  int v; # assume v has been initialized
  int smallest, largest;
  # receive smallest and largest so far, then update
  # them by comparing their values to v
  receive values[i](smallest, largest)
  if (v < smallest)
    smallest = v;
  if (v > largest)
    largest = v;
  # send the result to the next processes, then wait
  # to get the global result
  send values[(i+1) mod n](smallest, largest);
  receive values[i](smallest, largest);
}

```

Figure 7.13 Exchanging values using a circular ring.