

A Simple Example with OpenMP

```

    program compute_pi
    integer n, i
    double precision w, r, sum, pi, f, a
c   function to integrate
    f(a) = 4d0 / (1d0 + a*a)
c   number of integration intervals
    n = 100
c   calculate the interval size
    w = 1d0/n
    sum = 0d0
!$OMP PARALLEL DO PRIVATE(x), SHARED(w)
!$OMP& REDUCTION(+: sum)
    do i = 1, n
        x = w * (i - 0.5d0)
        sum = sum + f(x)
    enddo
    pi = w * sum
end
```

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