

5.1.2

(* padd.sml *)

(* 再帰で使うときは rec をつける *)

```
val rec padd = fn (P, nil) => P
                | (nil, Q) => Q
                | ((P:real)::ps, q::qs) => (P+q)::padd(ps,qs);
```

(* smult.sml *)

```
val rec smult = fn (nil, q) => nil
                | ((p:real)::ps, q) => (p*q)::smult(ps, q);
```

(* pmult *)

```
val rec pmult = fn (P, nil) => nil
                | (P, q::qs) => padd(smult(P, q), 0.0::pmult(P, qs));
```

(* sumPairs.sml *)

```
val rec sumPairs = fn (nil) => 0
                  | ((x,y)::zs) => x + y + sumPairs(zs);
```

(* merge.sml *)

```
val rec merge = fn (nil, M) => M
                | (L, nil) => L
                | (L as x::xs, M as y::ys) =>
                    if x<y then x::merge(xs, M)
                    else y::merge(L, ys);
```

(* comb.sml *)

```
val rec comb = fn (_, 0) => 1
                | (n, m) => if m=n then 1
                           else comb(n-1, m) + comb(n-1, m-1)
```