Exercise 2.59.

Implement the `union-set` operation for the unordered-list representation of sets.

Answer.

Once again, we can use the recursive strategy while implementing `intersection-set` just before. Suppose we know how to form the union of `set2` and the `cdr` of `set1`, the only distinction we should notice is to include the `car` of `set1` whenever it is not in `set2`, rather than the practice we saw in procedure `intersection-set`.

```
(define (union-set set1 set2)
  (cond ((null? set1) set2)
        ((null? set2) set1)
        ((not (element-of-set? (car set1) set2))
         (cons (car set1)
               (union-set (cdr set1) set2)))
        (else (union-set (cdr set1) set2))))
```