PS 2
Özlem Şerifoğulları

Problem 1

- (1 (2 3) 4)
- (((1 2) 3 4) 5 6)
- ((()))
- (1 . 2)
- (1 2)
- 1
- (2)
- 3
- c
- (1 a . b)
- (b c)

Problem 2

- (list 1 (cons 2 3) 4)
- (list 1 2)
- (cons 1 2)
- (list 1 2 (list 3 4) (list 5 6))
- (list '() 1 2)
- (list 1 (cons 2 3))
- (list 'a 'b '(c d) (cons 'e 'f))
- '(a (cons b c))

Problem 3

- Part A

```
(define (even-numbers lst)
   (cond ((null? lst) '())
         ((even? (car lst)) (cons (car lst) (even-numbers (cdr lst))))
                  (else (even-numbers (cdr lst)))))
```

- Part B

```
(define (substitute x y lst)
     (if (null? lst) '()
          (if (eq? y (car lst)) (cons x (substitute x y (cdr lst)))
               (cons (car lst) (substitute x y (cdr lst))))))
```

Problem 4

- Procedure
- Procedure
- Procedure
- 10
- Procedure
- 12
- “bye”
- 11

Problem 5

(define (double proc) (lambda (x) (proc (proc x))))