Name: _____   ID#: _____

Question 1:

Construction is one of the higher-order functions discussed in the class? Briefly define it and give an example for its use.   (**3 points**)

Question 2:

Show an example in Scheme of binding the lambda expression $\lambda(x)\ x * x + 2*x$ to the function name `func`.   (**3 points**)

Question 3:   (**2 points**)

What does the following Scheme function do?

```
(define (test a b)
 (cond
   ((null? b) '())
   ((eq? a (car b)) #t)
   (else (test a (cdr b)))))
```

Question 4:

Write a scheme function *reverse(l)* that receives a simple list *l* and return *l* reversed, i.e. the last element of *l* goes to the first, the second to last element goes to the second… and the first element of *l* goes to the last. **Hint:** You can use the function `append` developed in the class.   (**7 points**)