

8. Given these Scheme function definitions:

```
(define double (x) (+ x x))  
(define square (x) (* x x))  
(define inc (x) (+ x 1))
```

Determine the output produced by each Scheme code fragment below. [15 points]

a. (((lambda (f) ((lambda (g) (lambda (h) (f (g (h 4)))))) double)) square) inc)

100 $(2*(4+1))^2$

b. (((lambda (f) (lambda (g) ((lambda (h) (f (g (h 4)))) double))) square) inc)

81 $(2*4+1)^2$

c. (((((lambda (f) (lambda (g) (lambda (h) (f (g (h 4)))))) double) square) inc)

50 $2*(4+1)^2$

d. ((lambda (f) ((lambda (g) ((lambda (h) (f (g (h 4)))) double)) square)) inc)

65 $(2*4)^2+1$

e. ((lambda (f) (((lambda (g) (lambda (h) (f (g (h 4)))) double) square)) inc)

33 $2*4^2+1$