

Computer Science 61A

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Worksheet 6: What will Scheme Print? (Midterm #2)

Instructions: Write what scheme will print given the following expressions. If Scheme will print out an error, write: “**error;**” if Scheme will print out a procedure, write: “**procedure.**”

- 1.) `(append (cons 5 '()) (list 3 4 (cons 5 6)))`
- 2.) `(append (list 5 6) 2)`
- 3.) `(append (list 5 (cons 6 4) (cons 3 2)) 3)`
- 4.) `(append (cons 5 6) (cons 3 2))`
- 5.) `(append (cons 5 (list 6 3)) (cons 3 2))`
- 6.) `(cons 5 (list 3 5 7))`
- 7.) `(pair? (cons 5 (cons 6 '())))`
- 8.) `(pair? (cons 6 (cons 6 2)))`
- 9.) `(list? (cons 5 (cons 6 '())))`
- 10.) `(list? (cons 5 (cons 6 2)))`
- 11.) `(null? (cons 5 6))`
- 12.) `(null? (cons '() '()))`
- 13.) `(list? '())`
- 14.) `(append (list 5 6 (cons 3 4) (list 7)) (cons 3 4))`
- 15.) `(append (cons 5 '()) (cons 5 2))`
- 16.) `(eq? 'a 'a)`
- 17.) `(define a 'a)`
`(define b a)`
`(eq? a 'a)`

- (eq? a b)
- 18.) (equal? (list 1 2 3) (list 1 2 3))
- 19.) (eq? (list 1 2 3) (list 1 2 3))
- 20.) (memq (list 1 2 3) (list 1 2 3))

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NOTE: , (commas) separate different things that scheme prints.

- 1.) (5 3 4 (5 . 6))
- 2.) (5 6 . 2)
- 3.) (5 (6 . 4) (3 . 2) . 3)
- 4.) (5 3 . 2)
- 5.) (5 6 3 3 . 2)
- 6.) (5 3 5 7)
- 7.) #t
- 8.) #t
- 9.) #t
- 10.) #f
- 11.) #f
- 12.) #f
- 13.) #t
- 14.) (5 6 (3 . 4) (7) 3 . 4)
- 15.) (5 5 . 2)
- 16.) #t
- 17.) #t, #t
- 18.) #t
- 19.) #f
- 20.) #f