

342 HW3 Cody Peter

1. a) (let ((d 10)) (* (/ d 2) (/ d 2)))

b) (let ((c 30)) (* c 33.8))

2. a) Program

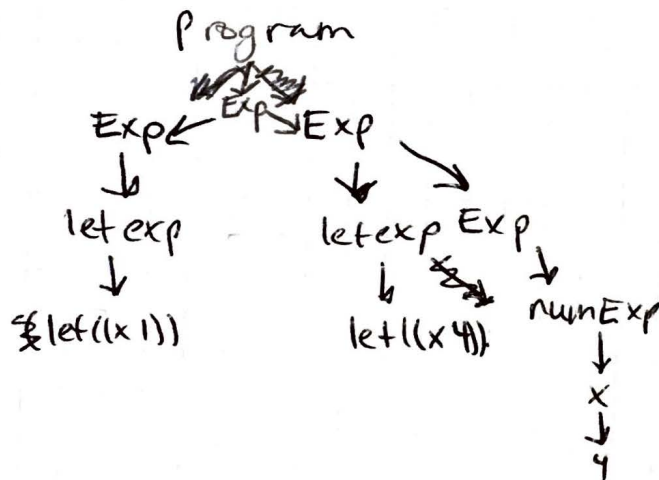
→ Exp Exp

→ letexp letexp

→ let x = 1 letexp

→ let x = 1 let x = 4 exp

→ let x = 1 let x = 4 x = 4



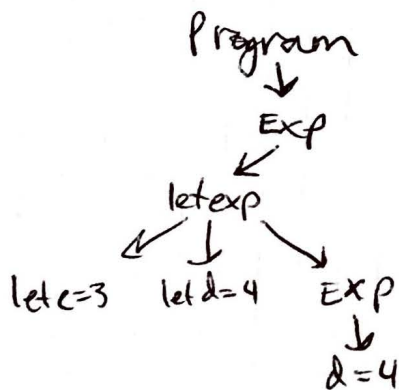
b) Program

→ Exp

→ letexp ~~letexp~~

→ let c = 3 let d = 4 exp

→ let c = 3 let d = 4 d = 4



3a) free variables: a, b bound: c, z, x, y

b) free: b, c, g bound: a, y, x

4) i) $(\text{let}((x \ 100))(\text{let}((x \ 1)(z \ 1)(y \ 1))(\text{let}((x \ 20)$
 $(*(x \ y \ z))))))$

ii) $(\text{let}((y \ 20)(x \ 1))(\text{let}((z \ 1))(\text{let}((x \ 2)(y \ 2)(z \ 1))(+(*x \ y \ z))))))$