1.

a. (let((a 58) (b 32) (c 1.8) (d 273.15)) (+ (/ (- a b) c) d))

b. (let((x 15)) (let((x 10) (y 12) (z 2)) (+ x (\* y z))))

2.

a. (let ((a 0) (b 4)) (let ((a b)) (+ a b)))

We have a “hole in one of the scopes”.

In “let ((a b)) (+ a b))”, we have: a = b = 4,

So, the result is a + b = 4 + 4 = 8

b. (\* (let ((b 4)) b) (let ((c 11) (a b)) (- a c)))

In “ let ((b 4)) b”, we have: b = 4, the result is b = 4

In “let ((c 11) (a b)) (- a c))”, we have: c = 11, a = b but b not found, then this VarLang program is error.

3.

a. (let ((c 5) (d a)) (let ((e c) (f b)) (\* c (- (\* e f)))))

free variables: a, b, c

bound variables: c, d, e, f

b. (let ((a b)) (let ((x y) (y 10)) (+ x y z (- g a))))

free variables: b, g, z

bound variables: a, x, y