Qu 1

x - float

y - str

z - bool

w - int
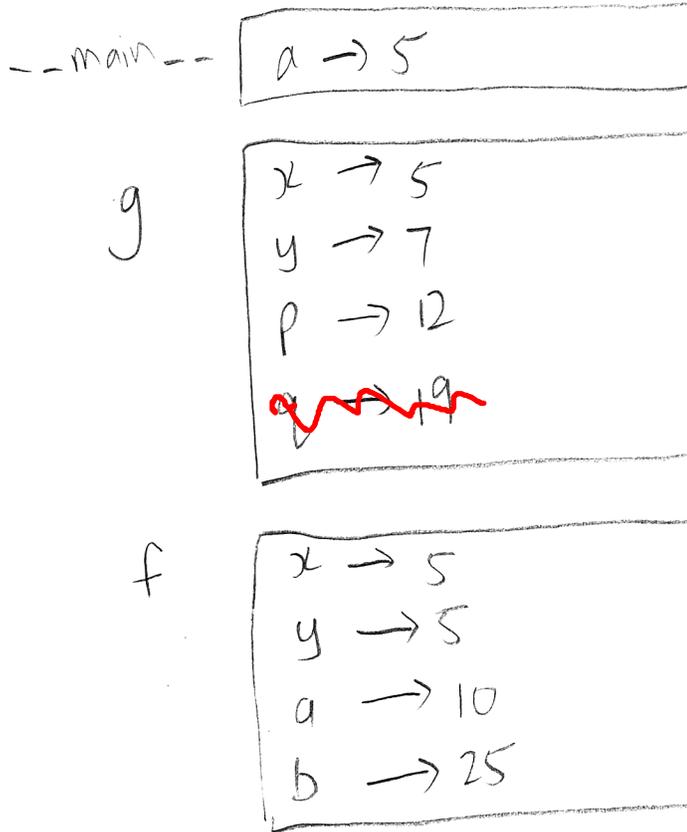
v - str

Qu 2

a)   i in range $(1, 4)$

b) $i \% 2 == 0$

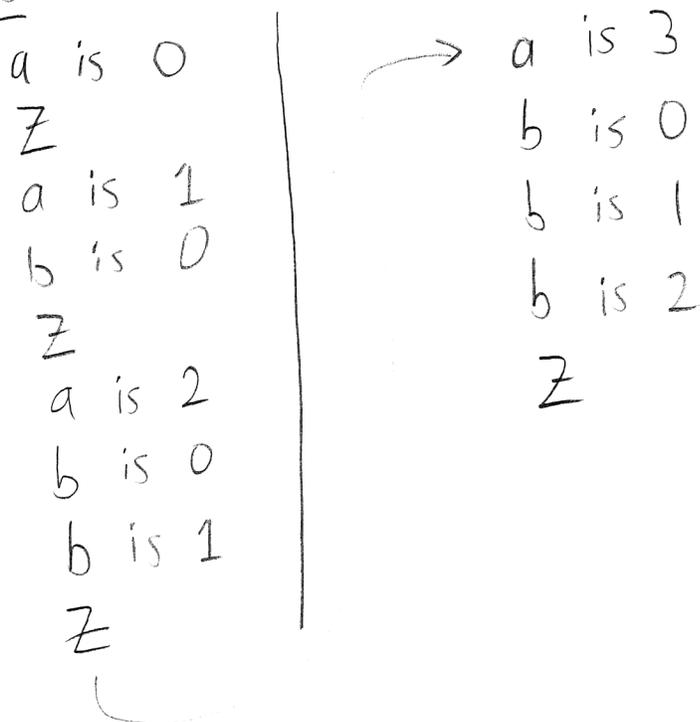c) $i * i$ or i ** 2

Qu 3

a)   3, 4, 10

b)   0, 2, 4, 6

Qu 4

--main-- | a → 5

g | x → 5
    y → 7
    p → 12
    ~~a → 9~~

f | x → 5
    y → 5
    a → 10
    b → 25

Qu 5

a is 0
Z
a is 1
b is 0
Z
a is 2
b is 0
b is 1
Z

→ a is 3
    b is 0
    b is 1
    b is 2
    Z

Qu 6

An algorithm is

a) a precise recipe for solving a problem.
The algorithm must terminate with a correct solution
for every input. For example, an addition algorithm must
produce the correct sum of its inputs for any numbers
provided as input.

b) Any one of:
Search engine indexing, PageRank, public key cryptography,
error correcting codes, pattern recognition, data compression,
database algorithms, digital signatures, uncomputable
problems.

c) Please refer to the reading, which gives
descriptions of each possibility from part (b).