Diberikan statement sebagai berikut

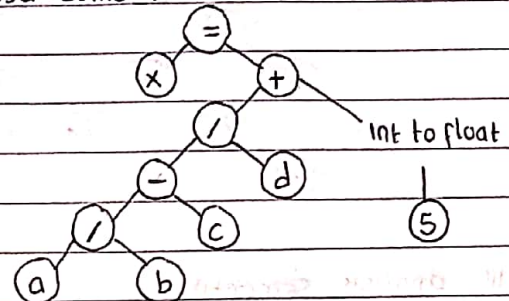1. $x = (a/b-c)/d+5$

Tentukan :

i. analisis leksikal

Identifiers = x, a, b, c, d
punctuation = '(',')'
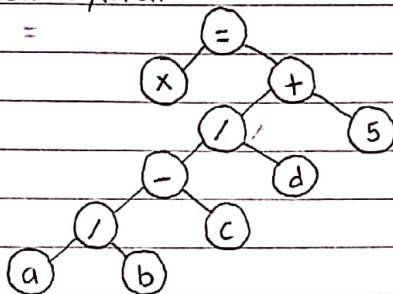Operators = $/, -, /, +$
Integer = 5

ii. analisa syntak

iii. analisa semantik

Int to float

iv.

$t_1 = $ int to float (5)
$t_2 = a/b$
$t_3 = t_2 - c$
$t_4 = t_3 / d$
$t_5 = t_4 + t_1$
$x = t_5$

v. Code Generator

```
LDF    R1, a
LDF    R2, b
DIVF   R2, R1, R2
SUBF   R3, R2, R3
LDF    R4, d
DIVF   R4, R3, R4
ADDF   R4, R4, * 5.0
STF    X, R4
```

2. $x = a + (b + c/d*e)/(f*g - h*i) + 5$

Tentukan

i. analisa leksikal
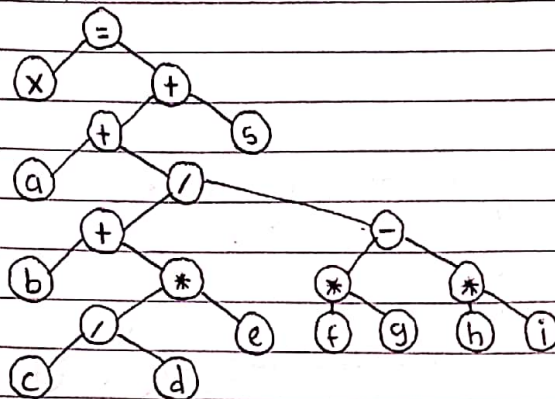
identifiers = $x, a, b, c, d, e, f, g, h, i$
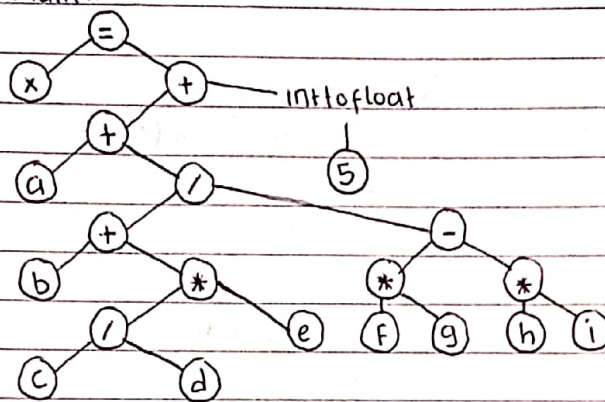punctuation = '(',')','(',')'
Operators = $+, +, /, *, /, *, -, *, +$
Integer = 5

ii. analisis sintak

```
            =
          /   \
         x     +
              / \
             +   5
            / \
           a   /
              / \
             +   -
            / \  / \
           b  * *   *
             /| /\  /\
            / e f g h i
           / \
          c   d
```

iii. analisis semantik

```
            =
          /   \
         x     +——— inttofloat
              / \         |
             +   /        5
            /   / \
           a   +   -
              / \  / \
             b  * *   *
               /| /\  /\
              / e f g h i
             / \
            c   d
```

iv. intermediet code generator

t_1 = inttofloat (5)

t_2 = c / d

t_3 = t_2 * e

t_4 = b + t_3

t_5 = f * g

t_6 = h * i

t_7 = t_5 - t_6

t_8 = t_4 / t_7

t_9 = a + t_8

t_{10} = t_9 + t_1

x = t_{10}

v. Code Generator

LDF R_1, c

LDF R_2, d

DIVF R_2, R_1, R_2

LDF R_3, e

MULF R_3, R_2, R_3

LDF R_4, b

ADDF R_4, R_4, R_3

LDF R_5, f

LDF R_6, g

MULF R_6, R_5, R_6

LDF R_7, h

LDF R_8, i

MULF R_8, R_7, R_8

SUBF R_8, R_6, R_8

DIVF R_8, R_4, R_8

LDF R_9, a

ADDF R_9, R_9, R_8

ADDF R_9, R_9, #5.0

STF   x, R_9