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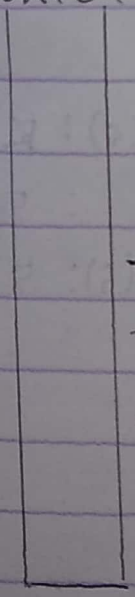
Nama : Faiz Hidayat

NIM : 20420026

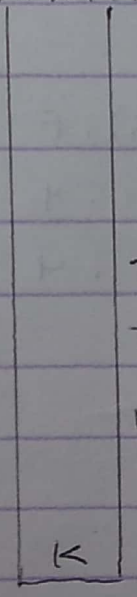
Kelas : IF2A

1. 1. CREATE(S), MAX(S) = 8
2. PUSH(S, 'K')
3. IF NOEL(S) > 5 THEN GOTO 6
4. PUSH(S, 'E')
5. GOTO 2
6. IF ISEMPTY(S) THEN GOTO 9
7. PRINT TOP(S)
8. PRINT NOEL(S)
9. END

① CREATE(S), MAX(S) = 8



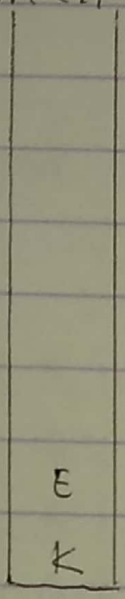
② PUSH(S, 'K')



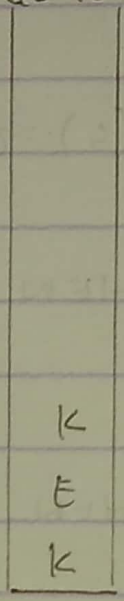
3 IF NOEL(S) > 5 THEN GOTO 6

GOTO 4, because IF NOEL(S) < 5

④ PUSH(S, 'E')

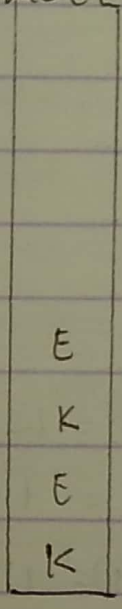


⑤ GOTO 2 → PUSH(S, 'K')

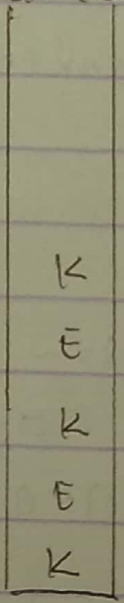


③ IF NOEL(S) < 5 THEN GOTO 4

④ PUSH(S, 'E')

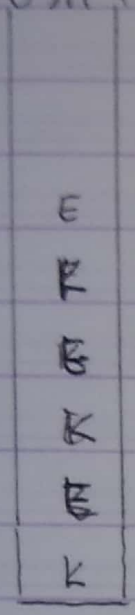


⑤ GOTO 2 → PUSH(S, 'K')



⑤ IF NOEL(S) < 5 THEN GOTO 4

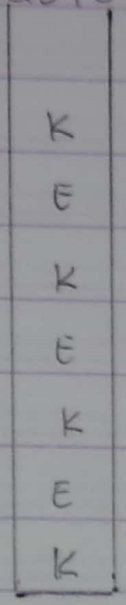
④ PUSH (S, 'E')



E
K

TOP(S) : E
Top : 6
NOEL(S) : 6

⑤ GOTO 2 → PUSH(S, 'K')



K
E
K
E
K
E
K

TOP(S) : K
Top : 7
NOEL(S) : 7

③ IF NOEL(S) > 5 THEN GOTO 6

⑥ IF ISEMPTY(S) = False THEN GOTO 7

⑦ PRINT TOP(S)

TOP(S) : K

⑧ PRINT NOEL(S):

NOEL(S) : 7

⑨ END

2. 1. Ubah rentetan infiks ke prefix dan postfix, hitung hasilnya menggunakan evaluasi tumpukan.

a. ((2+3)^2)-(2*3)

Prefix = ((+,2,3)^2)-(*,2,3)

= (^,+,2,3,2)-(*,2,3)

= -,^,+,2,3,2,*,2,3

Postfix = ((2,3,+)^2))-(2,3,*)

= (2,3,+,2,^)-(2,3,*)

= 2,3,+,2,^,2,3,*,-

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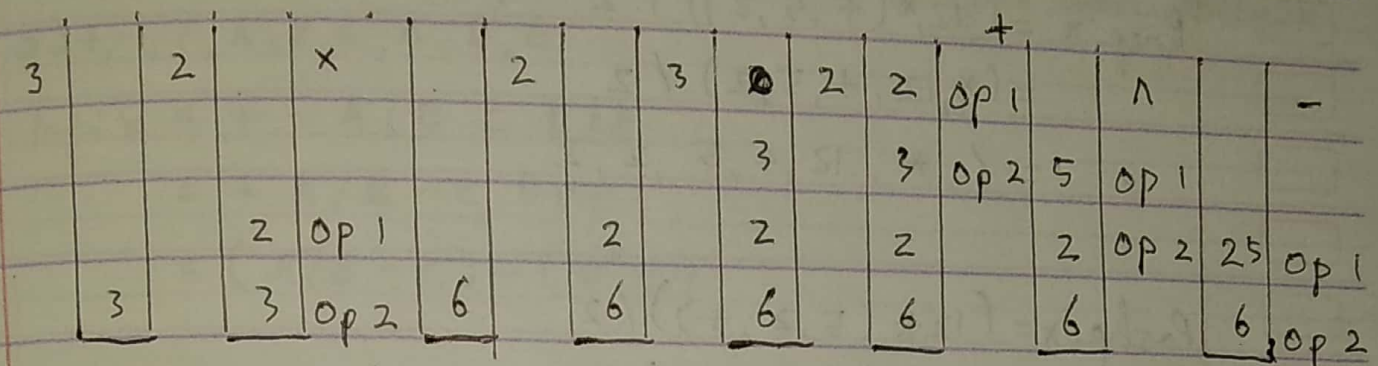
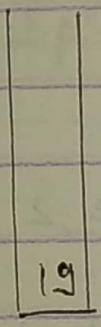
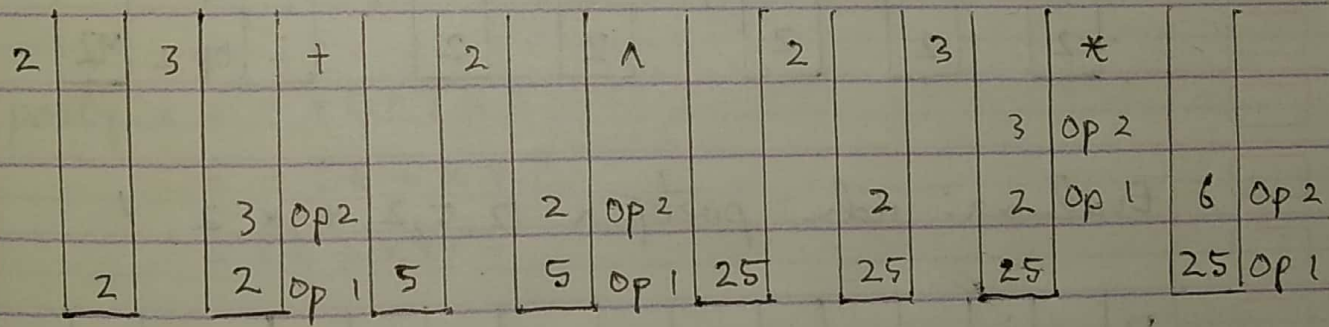
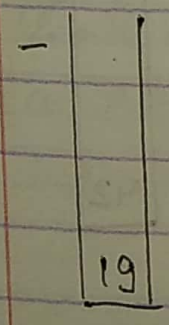
Evaluasi nilai prefix -, ^, +, 2, 3, 2, *, 2, 3





Evaluasi nilai postfix 2, 3, +, 2, ^, 2, 3, *, -





skola

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b. (12*(5+2))/2

Prefix = (12,*(+,5,2))/2

= (*,12,+,5,2)/2

= /,*,12,+,5,2,2

Postfix = (12*(5,2,+))/2

= (12,5,2,+,*)/2

= 12,5,2,+,*,2,/

Evaluasi nilai prefix /,*,12,+,5,2,2

2	2	5	+	12	x	/	
		5	op 1	12	op 1		
	2	2	op 2	7	op 2	84	op 1
2	2	2		2		2	op 2	42

Evaluasi: nilai postfix 12,5,2,+,*,2,/

12	5	2	+	x	2	/	
		2	op 2				
	5	5	op 1	7	op 2		
12	12	12		12	op 1	84		2	op 2	84	op 1	42

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2. Ubah notasi prefix ke dalam infix dan postfix

a.) +, −, /, A, B, C, ^, D, E

infix = + − A/B C D^E

= + A/B − C D^E

= (A/B − C) + (D^E)

Postfix = + − AB/C DE^

= + AB/C − DE^

= AB/C − DE^ +

b.) − + DE/XY

infix = − D + E X/Y

= (D + E) − (X/Y)

postfix = − + DE/XY

= − DE + XY/

= DE + XY/ −

3. Ubah notasi postfix ini ke dalam infix dan prefix

a.) ABC + −

infix = ABC + −

= A B + C

= A − (B + C)

prefix = ABC + −

= A + BC −

= − A + BC

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b.) GH + IJ / *

infix = GH + IJ / *

= G+H I/J *

= (G+H) * (I/J)

Prefix = GH + IJ / *

= +GH / IJ *

= * + GH / IJ