



Universidad Nacional Autónoma de México  
Facultad de Estudios Superiores Aragón



Ingeniería en Computación  
**COMPILADORES**  
Grupo:2608

**Profesor:** Pérez Medel Marcelo

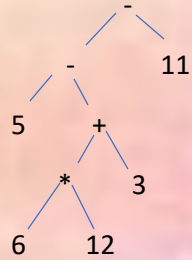
**TAREA 3**  
Expresiones Infijas

**Alumna:** Cruz Cervantes Guadalupe Sugeily

preorden  
raíz  
hijo izquierdo  
hijo derecho  
  
inorden  
hijo izquierdo  
raíz  
hijo derecho  
  
posorden  
hijo izquierdo  
hijo derecho  
raíz

Prioridad	Operador	Asociatividad
1	()	I → D, de adentro hacia afuera
2	^	D → I
3	*,/,%	I → D
4	+, -	I → D
5	<, >, <=, >=, ==, !=	I → D
6	NOT	D → I
7	AND	I → D
8	OR	I → D

1.-  $5-(6*12+3)-11$



**Prefija**

- - 5 + \* 6 12 3 11

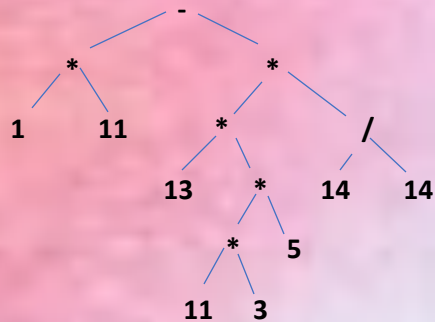
**Postfija**

5 6 12 \* 3 + - 11 -

**Evaluar**

12	6*12	3	72+3	5-75	-70-11
6		72		11	
5		5		-70	-81

2.-  $1*11-13*(11*3*5)*(14/14)$



**Prefija**

- \* 1 11 \* \* 13 \* \* 11 3 5 / 14 14

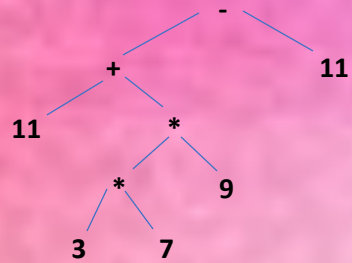
**Postfija**

1 11 \* 13 11 3 \* 5 \* \* 14 14 / \* -

## Evaluar

[illegible]

**3.-  $(11+(3*7)*9)-11$**



## Prefija

**- + 11 \* \* 3 7 9 11**

## Postfija

**11 3 7 \* 9 \* + 11 -**

## Evaluar

7	3*7	9	21*9	11+189		200-11	
3		21	189		11		
11		11	11		200		189





### Prefija

- / \* \* / 1 4 13 11 8 14

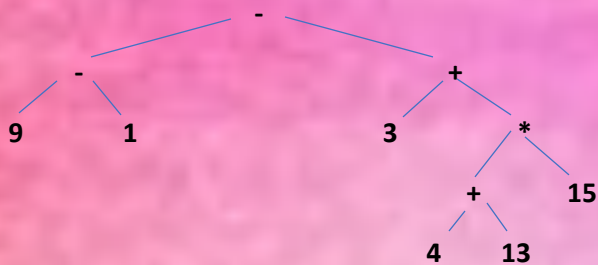
### Postfija

1 4 / 13 \* 11 \* 8 / 14 -

### Evaluar

	1/4		¼*13	13/4*11	143/4 / 8	143/32-14
4		13	11	8	14	
1		¼	13/4	143/4	143/32	-305/32

6.- 9-1-(3+(4+13)\*15)



### Prefija

- - 9 1 + 3 \* + 4 13 15

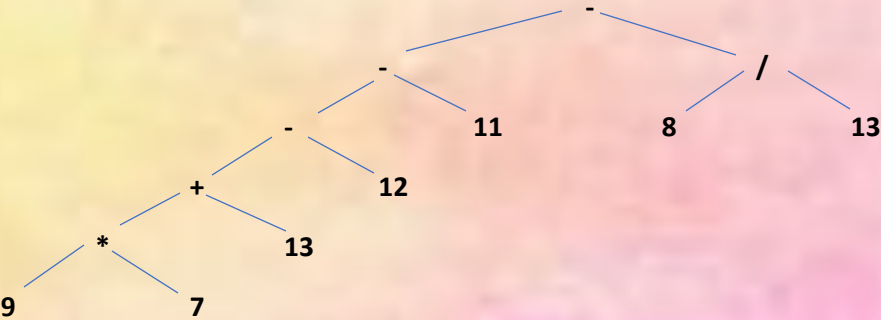
### Postfija

9 1 - 3 4 13 + 15 \* + -

### Evaluar

	9-1		4+13	17*15	3+255	8-258
		13	17	255		
		4	3	3	258	
1		3	8	8	8	-250
9		8				

7.-  $(9*7)+13-12-11-8/13$



**Prefija**

- - - + \* 9 7 13 12 11 / 8 13

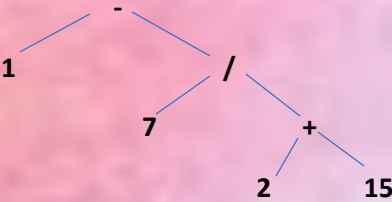
**Postfija**

9 7 \* 13 + 12 - 11 - 8 13 / -

**Evaluar**

	9*7		63+13		76-12		64-11	13	8/13		53-8/13	
7		13		12		11		8		8/13		
9		63		76		64		53		53		681/13

8.-  $1-7/(2+15)$



**Prefija**

- 1 / 7 + 2 15

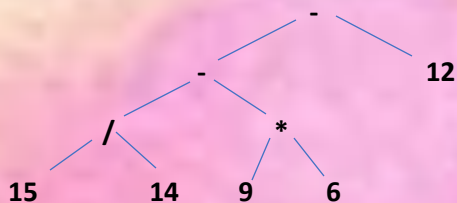
**Postfija**

1 7 2 15 + / -

Evaluar

15				
2	2+15	17	7/17	1-7/17
7		7		
1		1	7/17	10/17
			1	

9.- (15/14)-9\*6-12



Prefija

- - / 15 14 \* 9 6 12

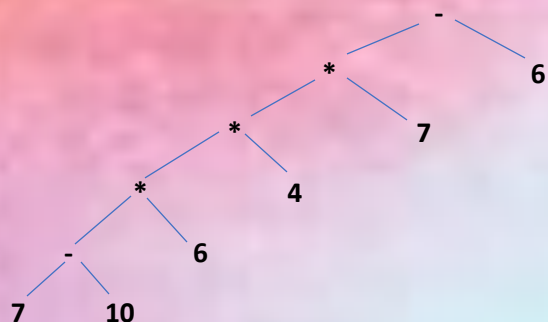
Postfija

15 14 / 9 6 \* - 12 -

Evaluar

	15/14	6	9*6	15/14-54	-741/14-12
14		9	54	12	
15		15/14	15/14	-741/14	-909/14

10.- (7-10)\*6\*4\*7-6



## Prefija

- \* \* \* - 7 10 6 4 7 6

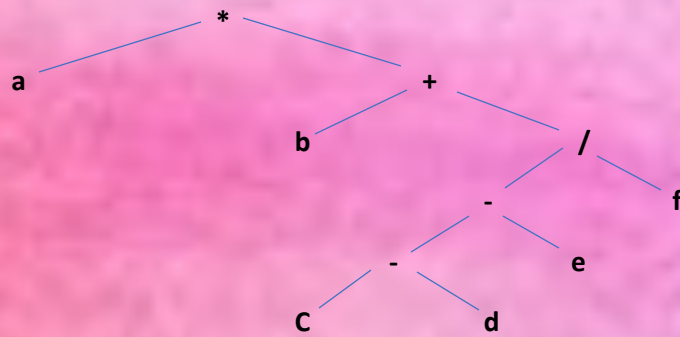
## Postfija

$$7 \ 10 - 6 * 4 * 7 * 6 -$$

## Evaluar

	7-10	-3*6	-18*4	-72*7		-504-6	
10		6	4	7		6	
7		-3	-18	-72		-504	-510

11.-  $a * (b + (c - d - e) / f)$



## Prefija

```
* a + b / - - c d e f
```

## Postfija

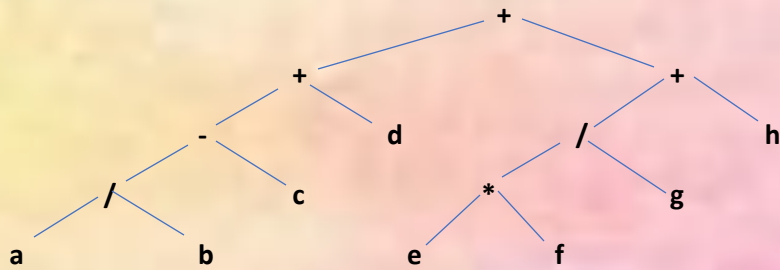
a b c d - e - f / + \*

## Evaluar

t1=c-d		t2=t1-e		t3=t2/f		t4=b+t3		t5= a*t4	
d		e		f					
c	c-d	t1	t1-e	t2	t2/f	t3	b+t3		a*t4
b		b		b		b		t4	
a		a		a		a		a	t5



12.-  $a/b - c + d + (e*f/g + h)$



**Prefija**

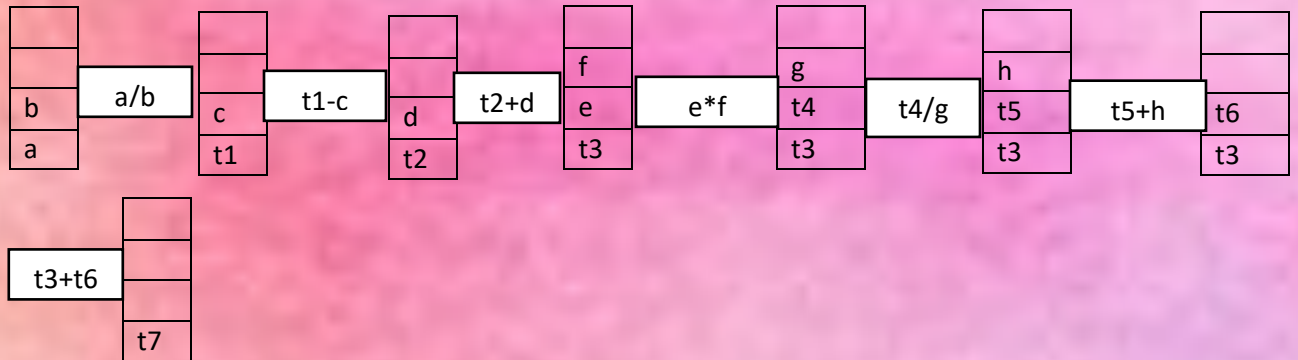
$++- / a b c d + / * e f g h$

**Postfija**

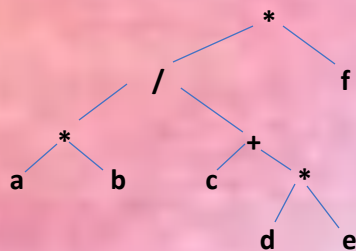
$a b / c - d + e f * g / h + +$

**Evaluar**

$t1=a/b$        $t2=t1-c$        $t3=t2+d$        $t4=e*f$        $t5=t4/g$        $t6=t5+h$        $t7=t3+t6$



13.-  $(a*b)/(c+d*e)*f$



**Prefija**

$* / * a b + c * d e f$

**Postfija**

$a b * c d e * + / f *$

## Evaluar

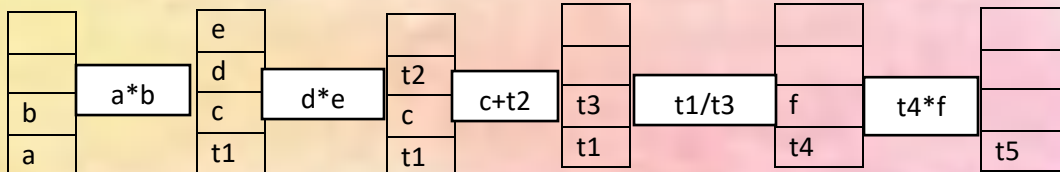
$$t1=a*b$$

$$t2=d*e$$

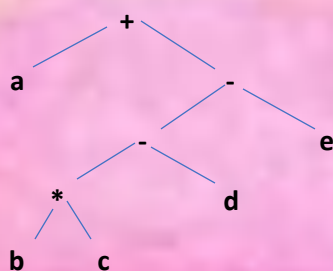
$$t3=c+t2$$

$$t4=t1/t3$$

$$t5=t4*f$$



$$14.- a+(b*c-d-e)$$



## Prefija

+ a - - \* b c d e

## Postfija

a b c \* d - e - +

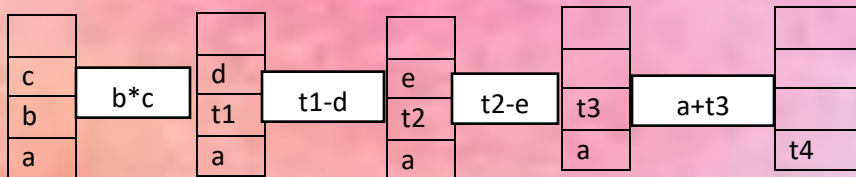
## Evaluar

$$t1=b*c$$

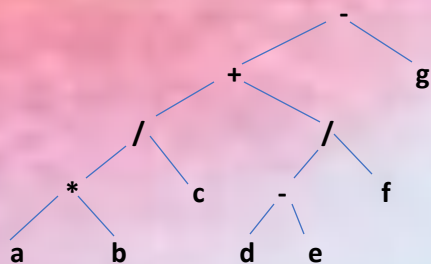
$$t2=t1-d$$

$$t3=t2-e$$

$$t4=a+t3$$



$$15.- (a*b/c)+(d-e)/f-g$$



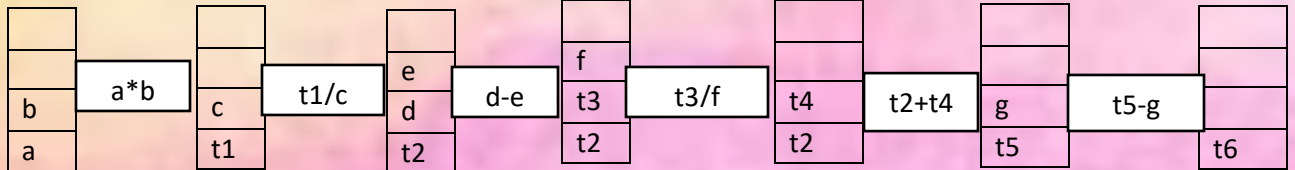
## Prefija

- + / \* a b c / - d e f g

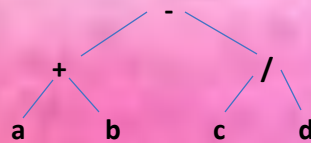
## Postfija

$$a \ b \ * \ c \ / \ d \ e \ - \ f \ / \ + \ g \ -$$

## Evaluar

$$t1=a*b$$
$$t_2 = t_1 / c$$
$$t_3 = d - e$$
$$t_4 = t_3 / f$$
$$t_5 = t_2 + t_4$$
$$t_6 = t_5 - g$$


16.-  $a+b-(c/d)$



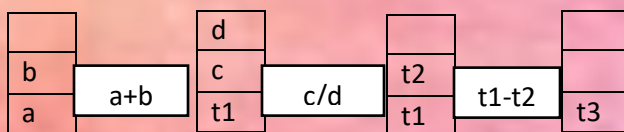
## Prefija

$$- + a b / c d$$

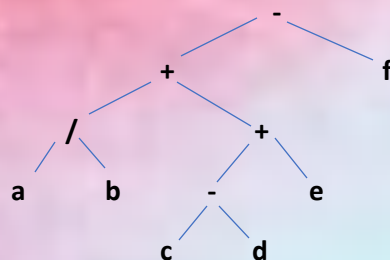
## Postfija

$$a \ b \ + \ c \ d \ / \ -$$

## Evaluar

$$t_1 = a + b$$
$$t_2 = c/d$$
$$t_3 = t_1 - t_2$$


17.-  $(a/b)+(c-d+e)-f$



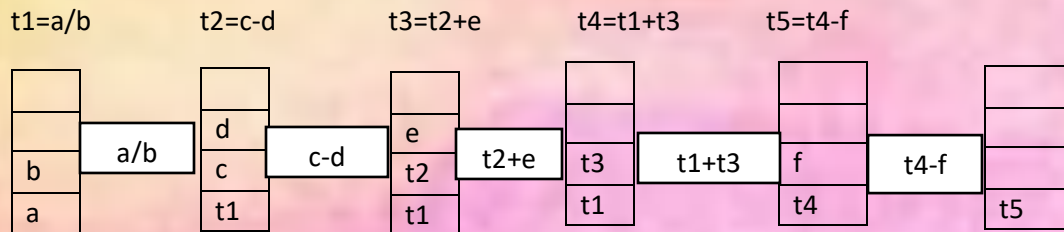
### Prefija

- + / a b + - c d e f

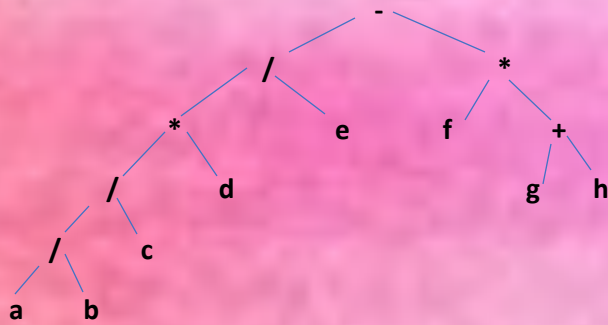
### Postfija

a b / c d - e + + f -

### Evaluar



### 18.- a/b/c\*d/e-f\*(g+h)



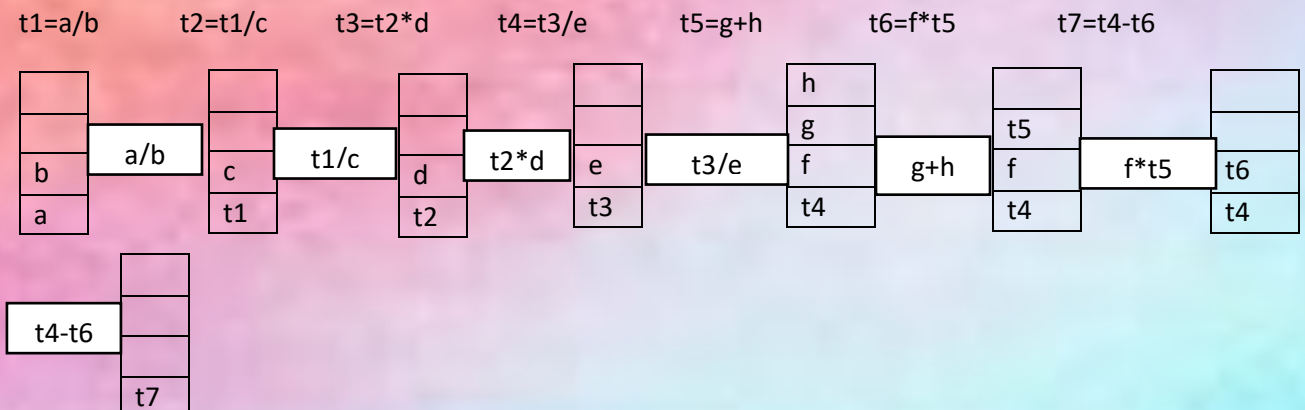
### Prefija

- / \* / / a b c d e \* f + g h

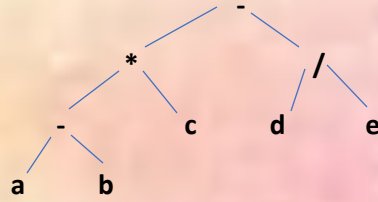
### Postfija

a b / c / d \* e / f g h + \* -

### Evaluar



### 19.- $(a-b)*c-d/e$



**Prefija**

- \* - a b c / d e

**Postfija**

a b - c \* d e / -

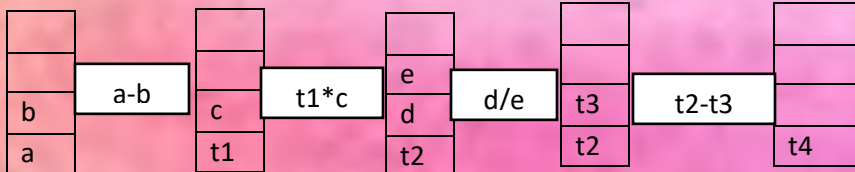
**Evaluar**

$t1 = a - b$

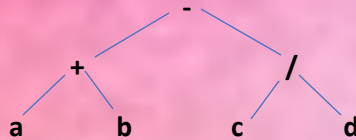
$t2 = t1 * c$

$t3 = d / e$

$t4 = t2 - t3$



### 20.- $(a+b)-c/d$



**Prefija**

- + a b / c d

**Postfija**

a b + c d / -

**Evaluar**

$t1 = a + b$

$t2 = c / d$

$t3 = t1 - t2$

