

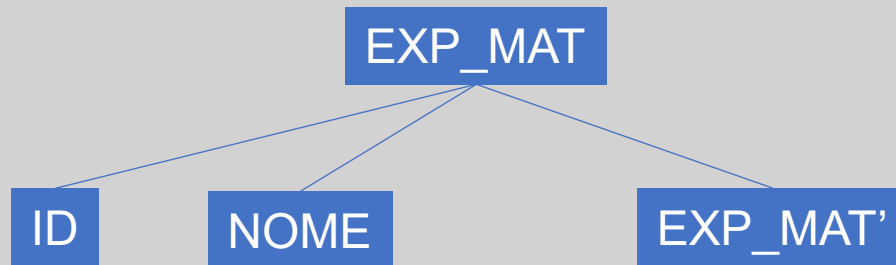
# Compiladores – Exemplo Código Intermediário

Eduardo Marques

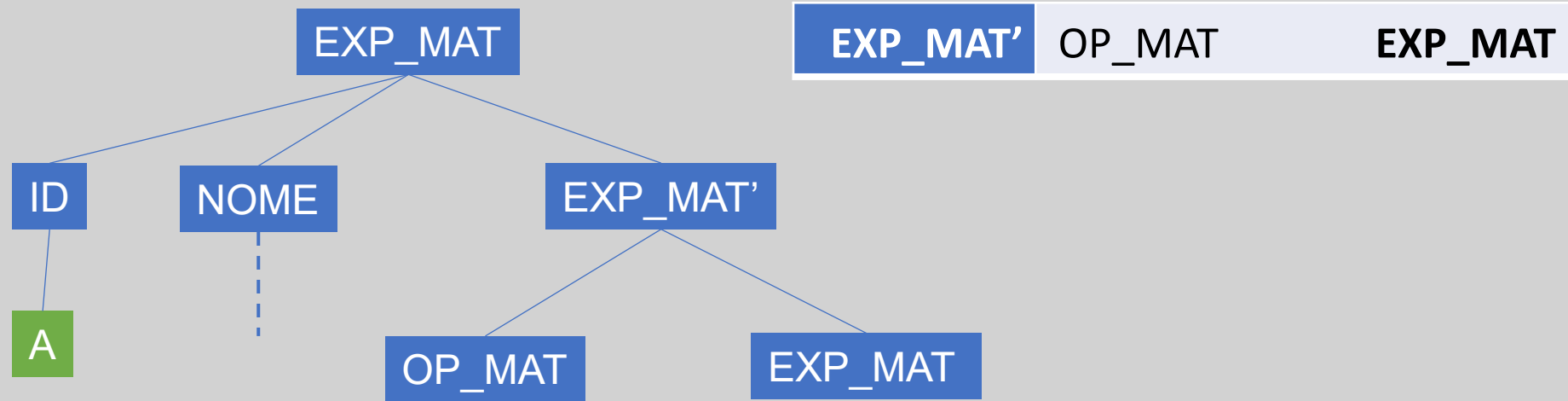
# Regra EXP\_MAT

EXP_MAT	ID	NOME	EXP_MAT'
	NUMERO		EXP_MAT'
EXP_MAT'	OP_MAT	EXP_MAT	
	€		

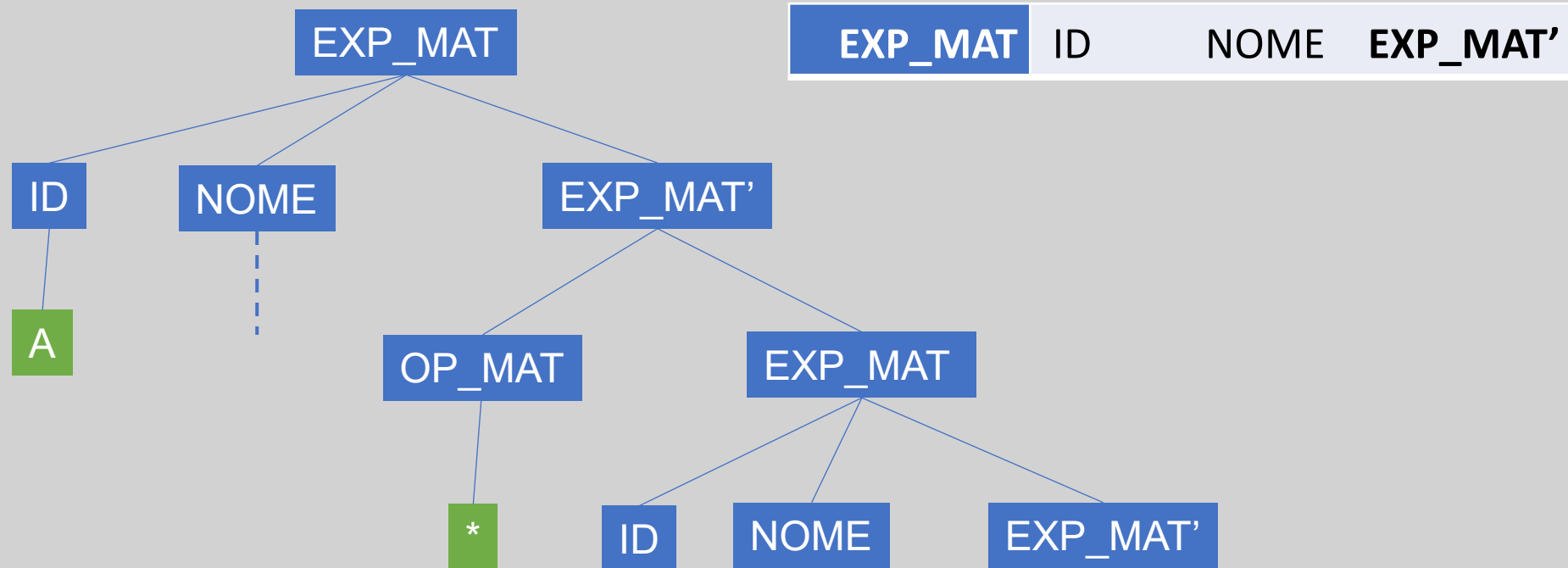
Exemplo:  $A * B$



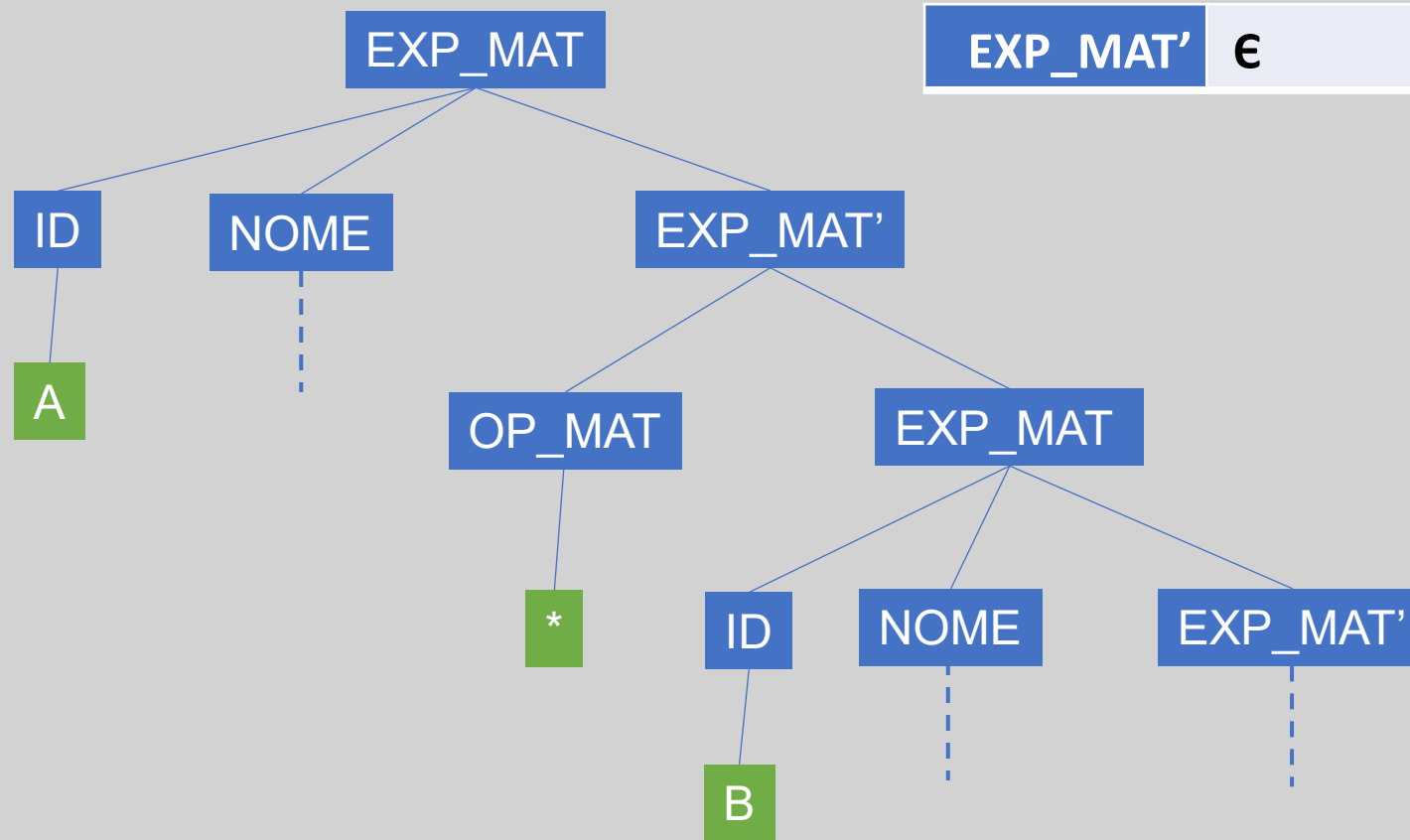
Exemplo:  $A * B$



Exemplo:  $A * B$

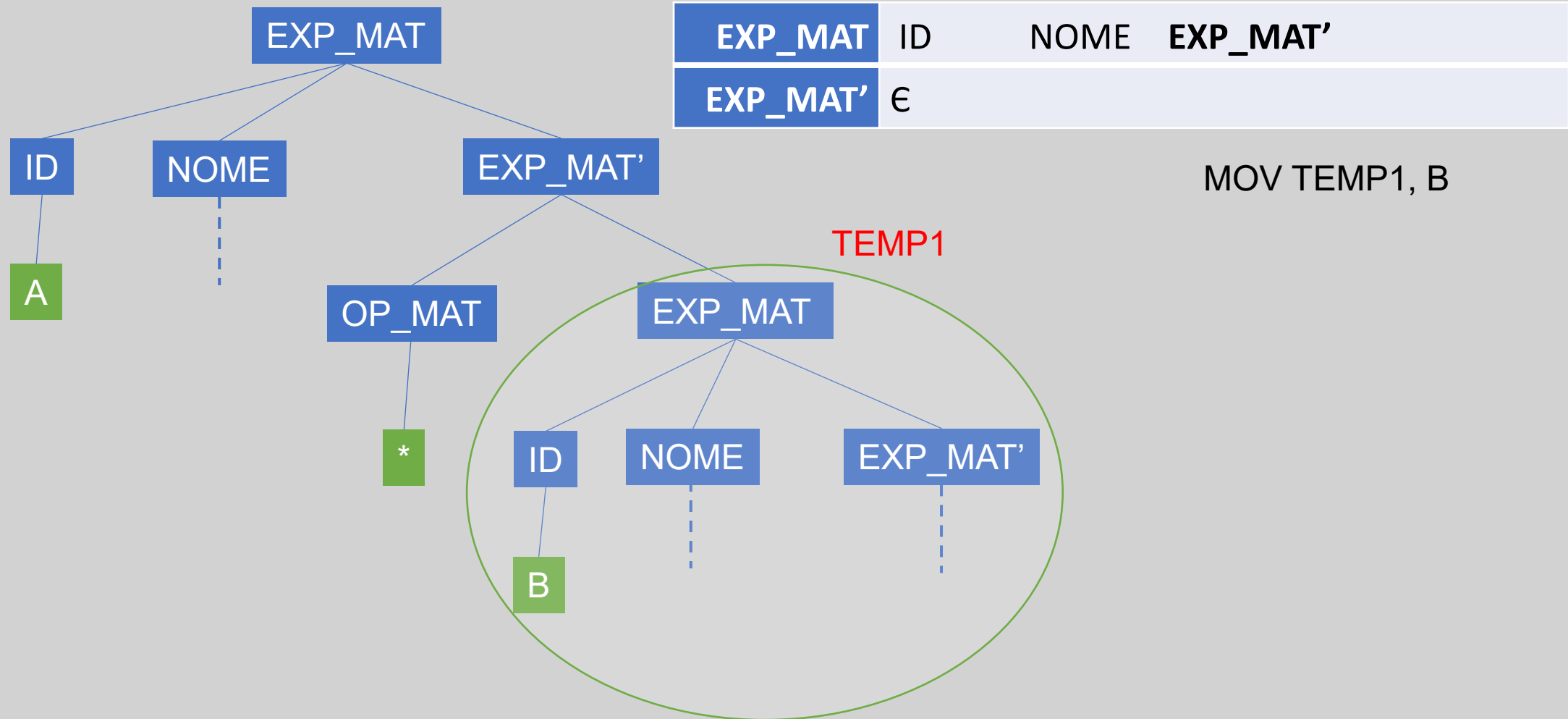


# Exemplo: $A * B$

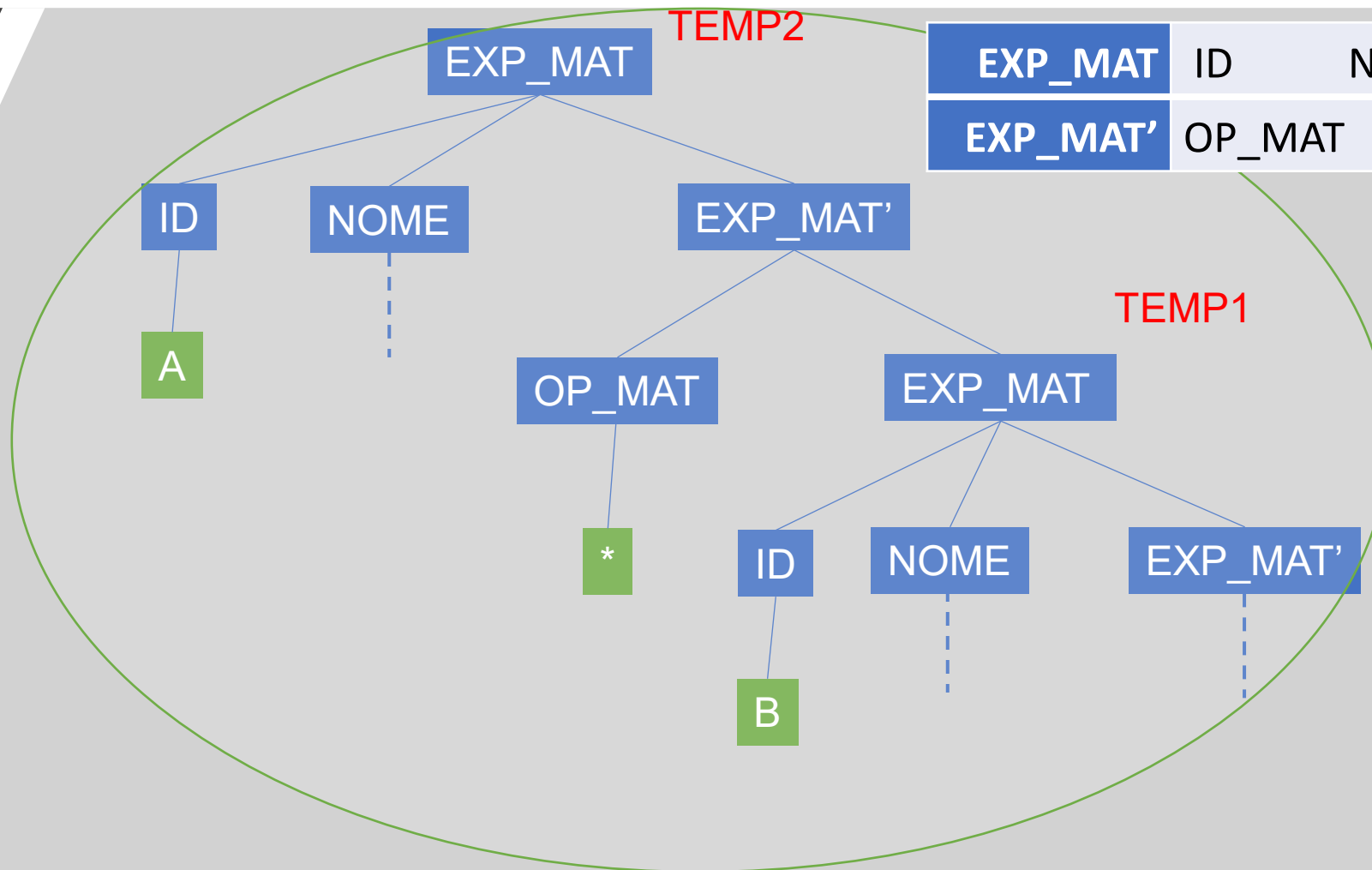


**EXP\_MAT'**  $\epsilon$

# Exemplo: $A * B$



# Exemplo: $A * B$



EXP_MAT	ID	NOME	EXP_MAT'
EXP_MAT'	OP_MAT	EXP_MAT	

MOV TEMP1, B  
MLT TEMP2, A, TEMP1



# Instrução da regra EXP\_MAT

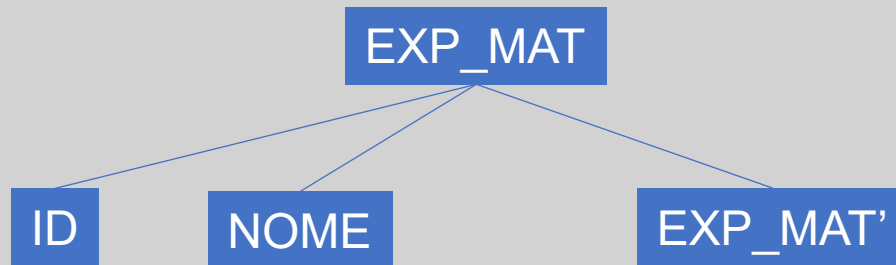
EXP_MAT	ID	NOME	EXP_MAT'
EXP_MAT'	OP_MAT	EXP_MAT	

**OP\_MAT TEMP, ID, TEMP\_EXP\_MAT**

EXP_MAT	ID	NOME	EXP_MAT'
EXP_MAT'	€		

**MOV TEMP, ID**

# Exemplo: $A + 10$

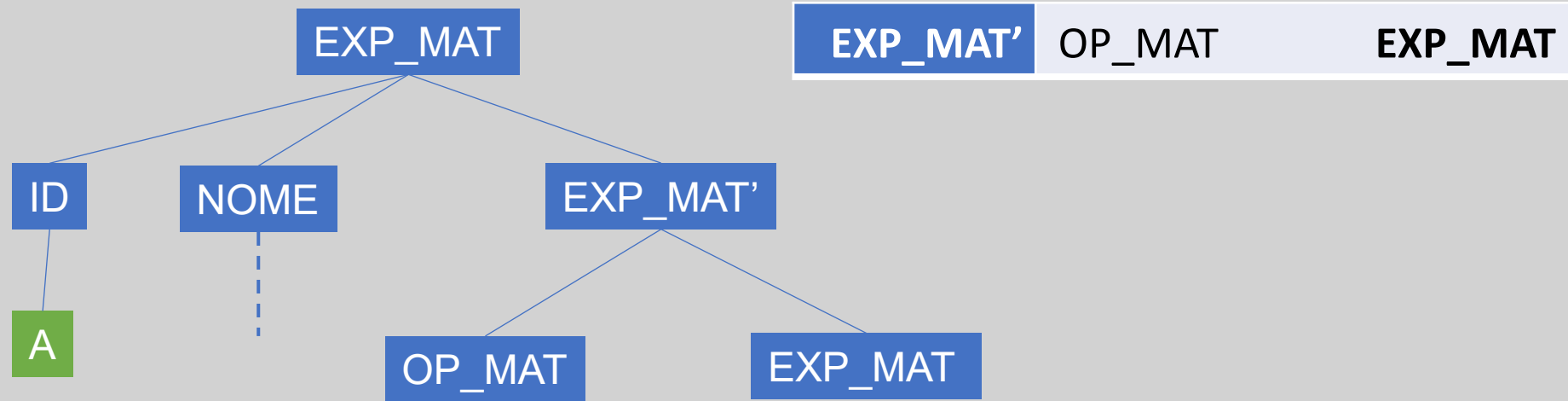


ID

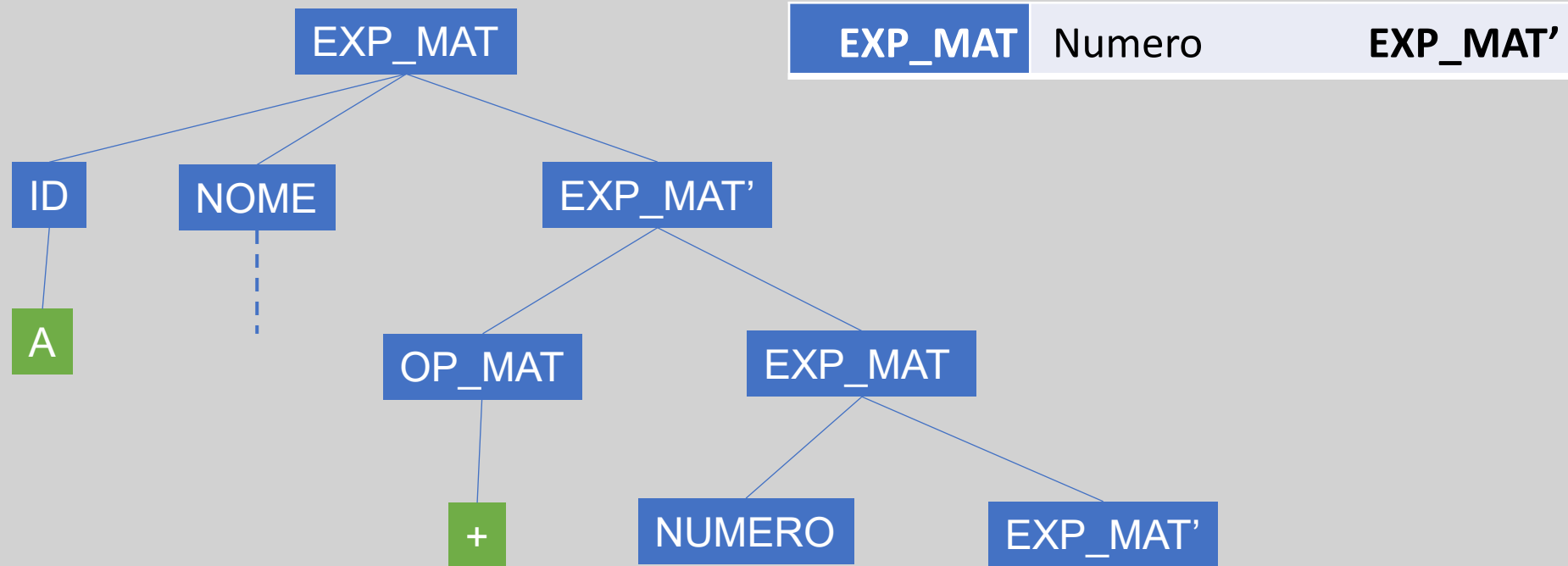
NOME

EXP\_MAT'

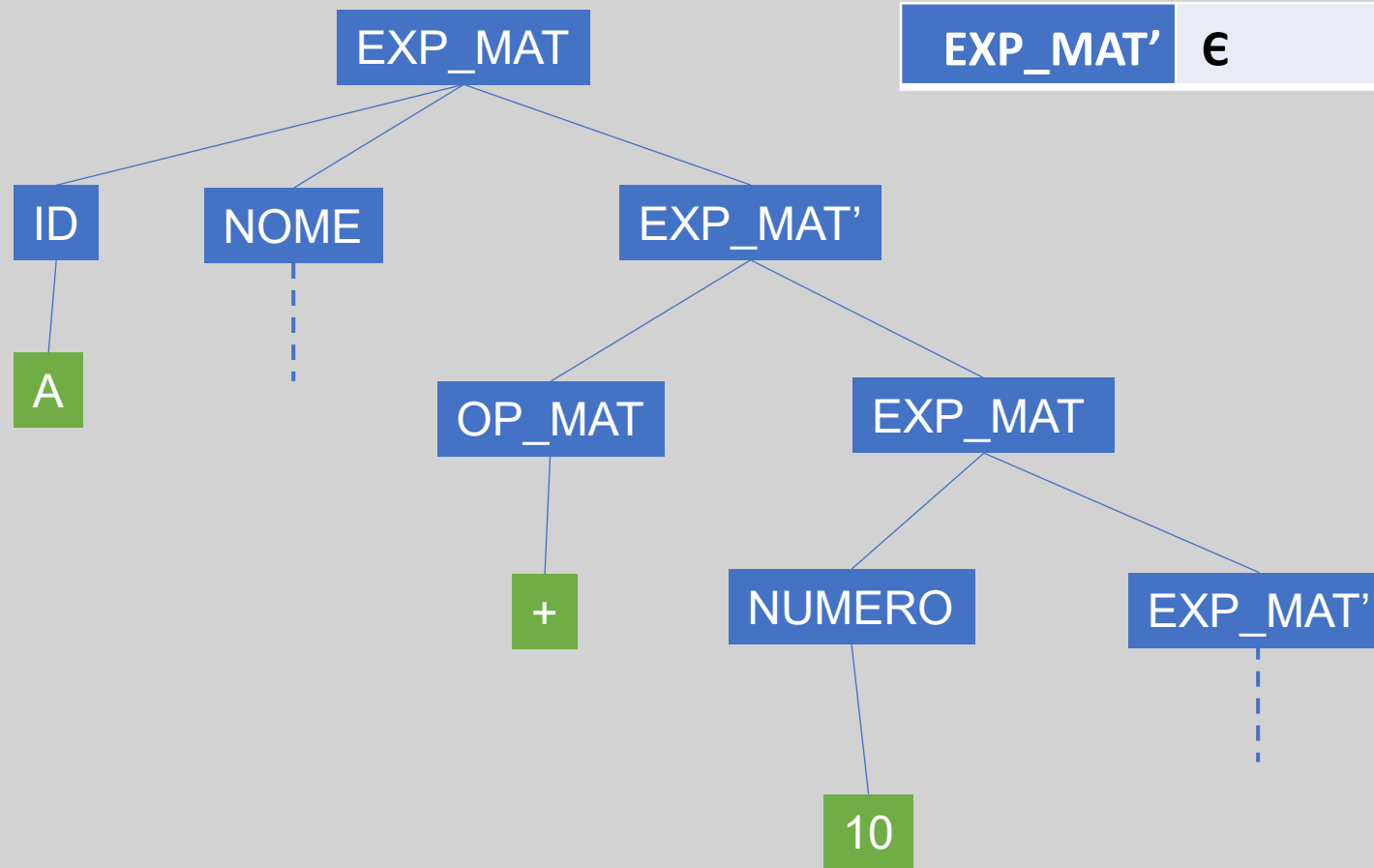
# Exemplo: $A + 10$



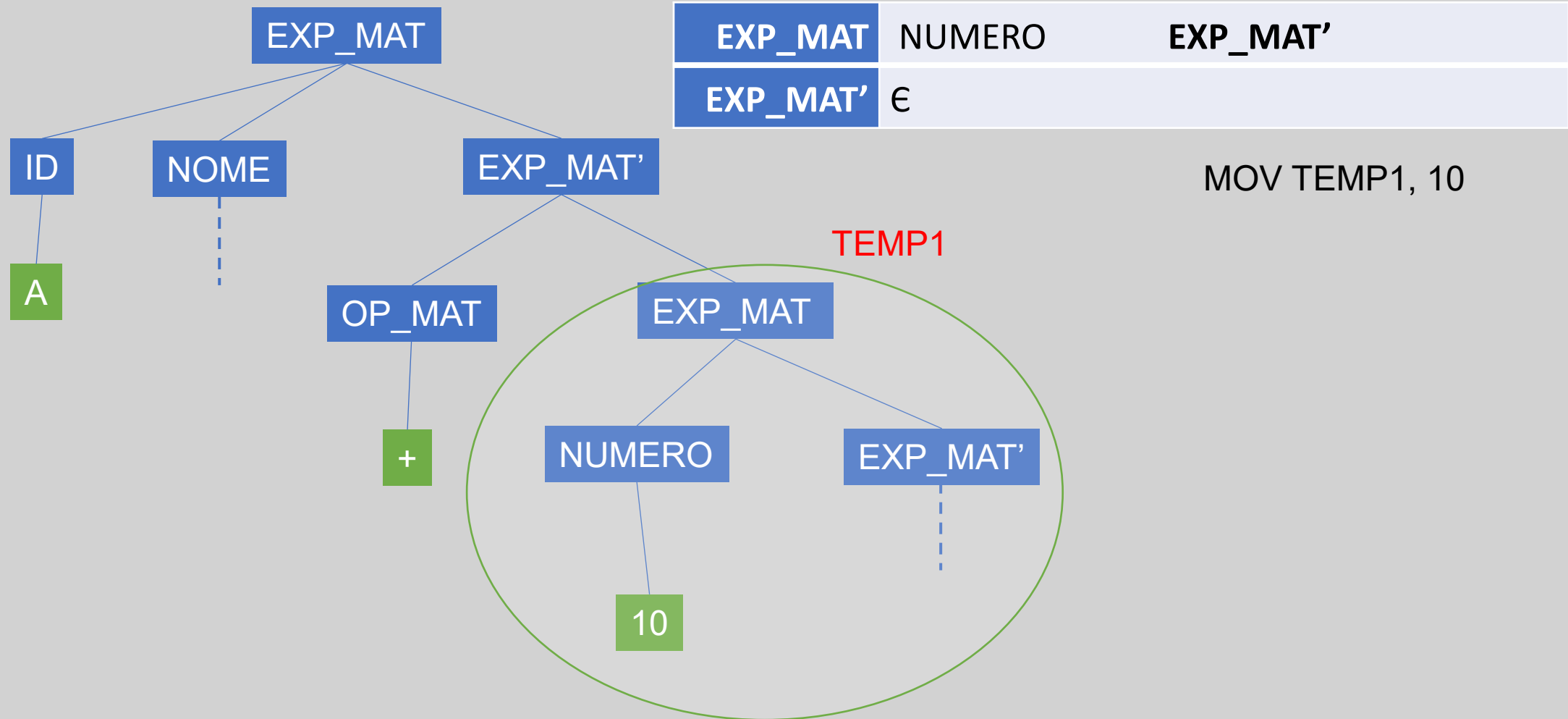
Exemplo:  $A + 10$



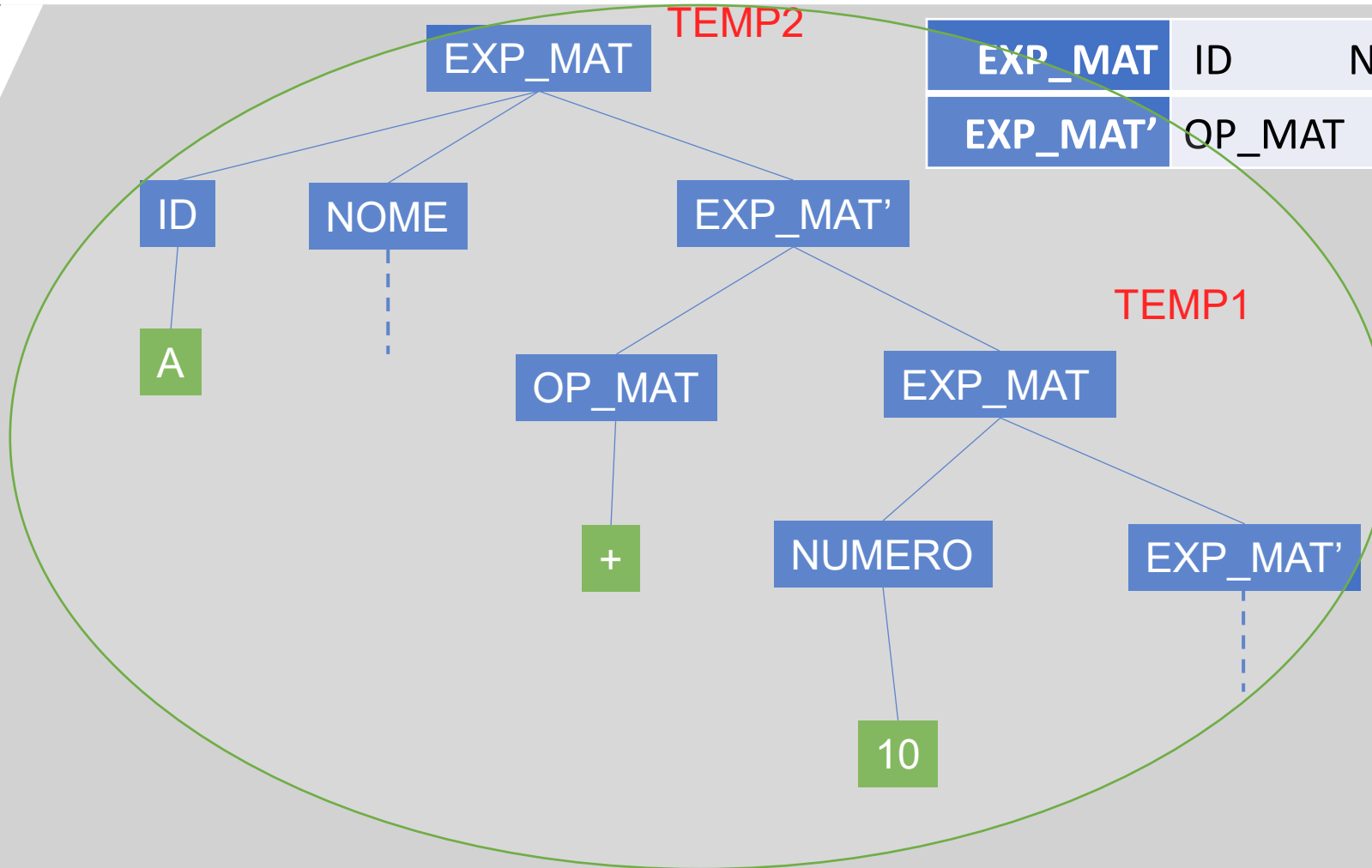
# Exemplo: $A + 10$



# Exemplo: $A + 10$



# Exemplo: $A + 10$



EXP_MAT	ID	NOME	EXP_MAT'
EXP_MAT'	OP_MAT	EXP_MAT	

MOV TEMP1, 10  
ADD TEMP2, A, TEMP1

# Instrução da regra EXP\_MAT

<b>EXP_MAT</b>	NUMERO	EXP_MAT'
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<b>EXP_MAT'</b>	OP_MAT	EXP_MAT
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**OP\_MAT** TEMP, NUMERO, TEMP\_EXP\_MAT

<b>EXP_MAT</b>	NUMERO	EXP_MAT'
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<b>EXP_MAT'</b>	€
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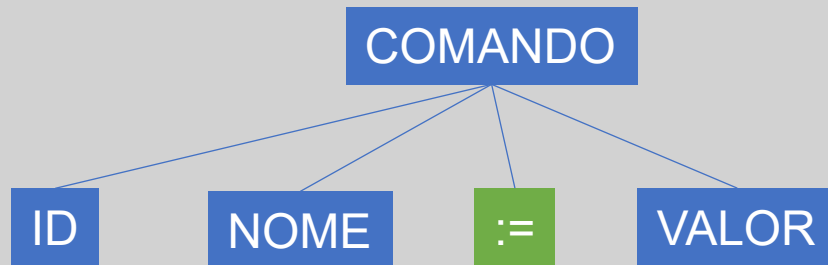
**MOV** TEMP, NUMERO



# Regra COMANDO

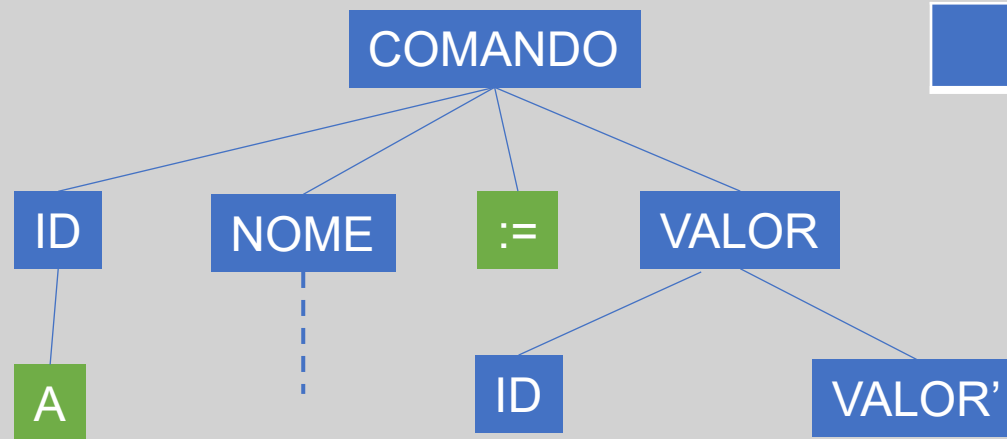
COMANDO	ID	NOME	:=	VALOR	
	while	EXP_LOGICA		BLOCO	
	if	EXP_LOGICA	then	BLOCO	ELSE
	write	CONST_VALOR			
	read	ID	NOME		
VALOR	ID	VALOR'			
	NUMERO	EXP_MAT'			
VALOR'	NOME	EXP_MAT'			
	(	LISTA_NOME	)		

# Exemplo: $A := B + 10$



<b>COMANDO</b>	ID	NOME	:=	VALOR
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# Exemplo: $A := B + 10$

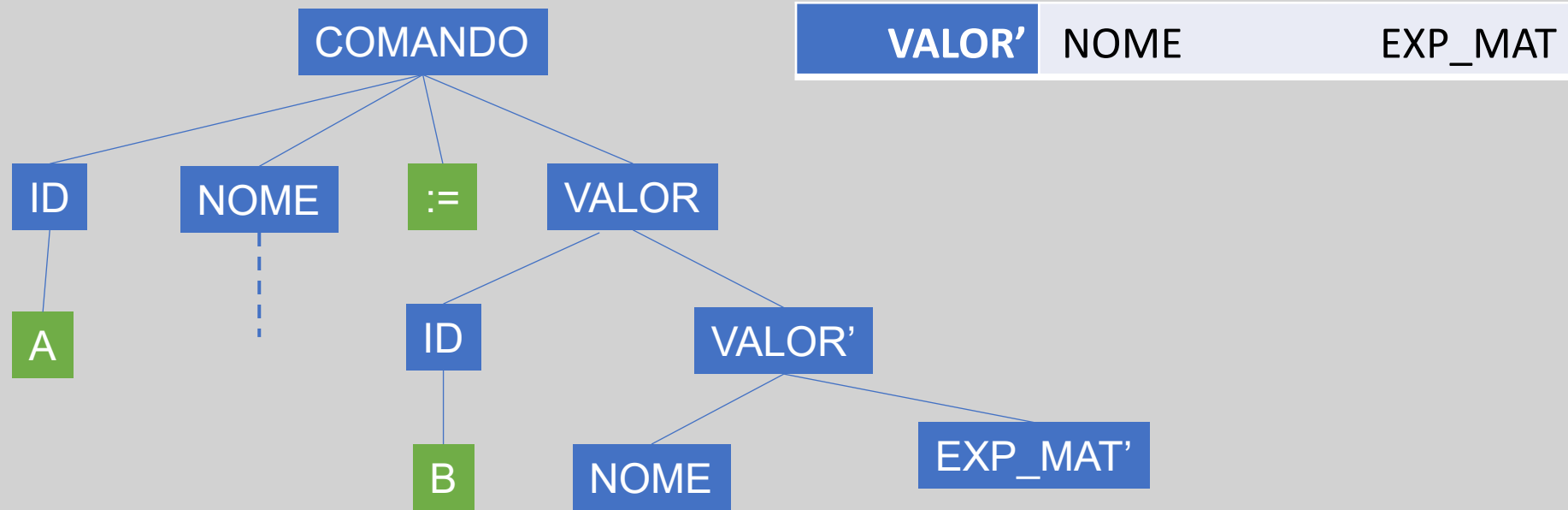


**VALOR**

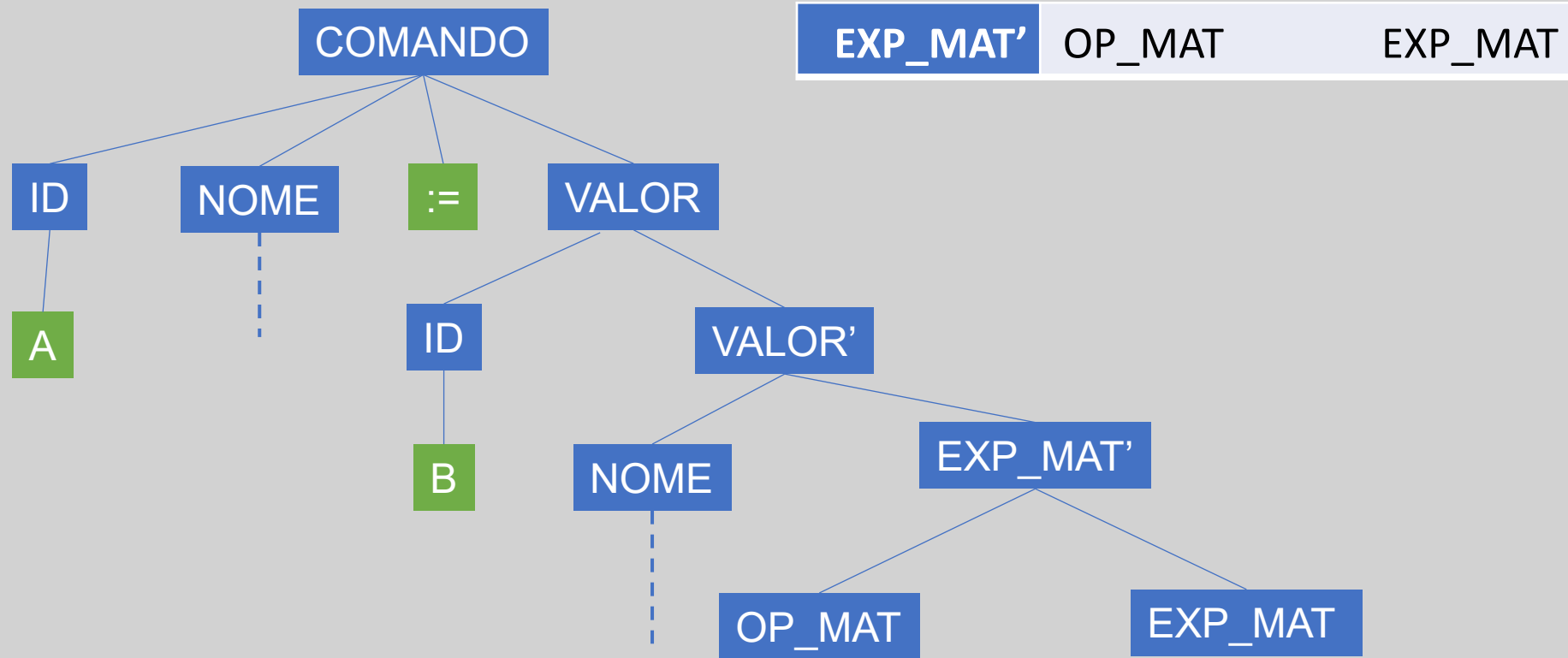
ID

VALOR'

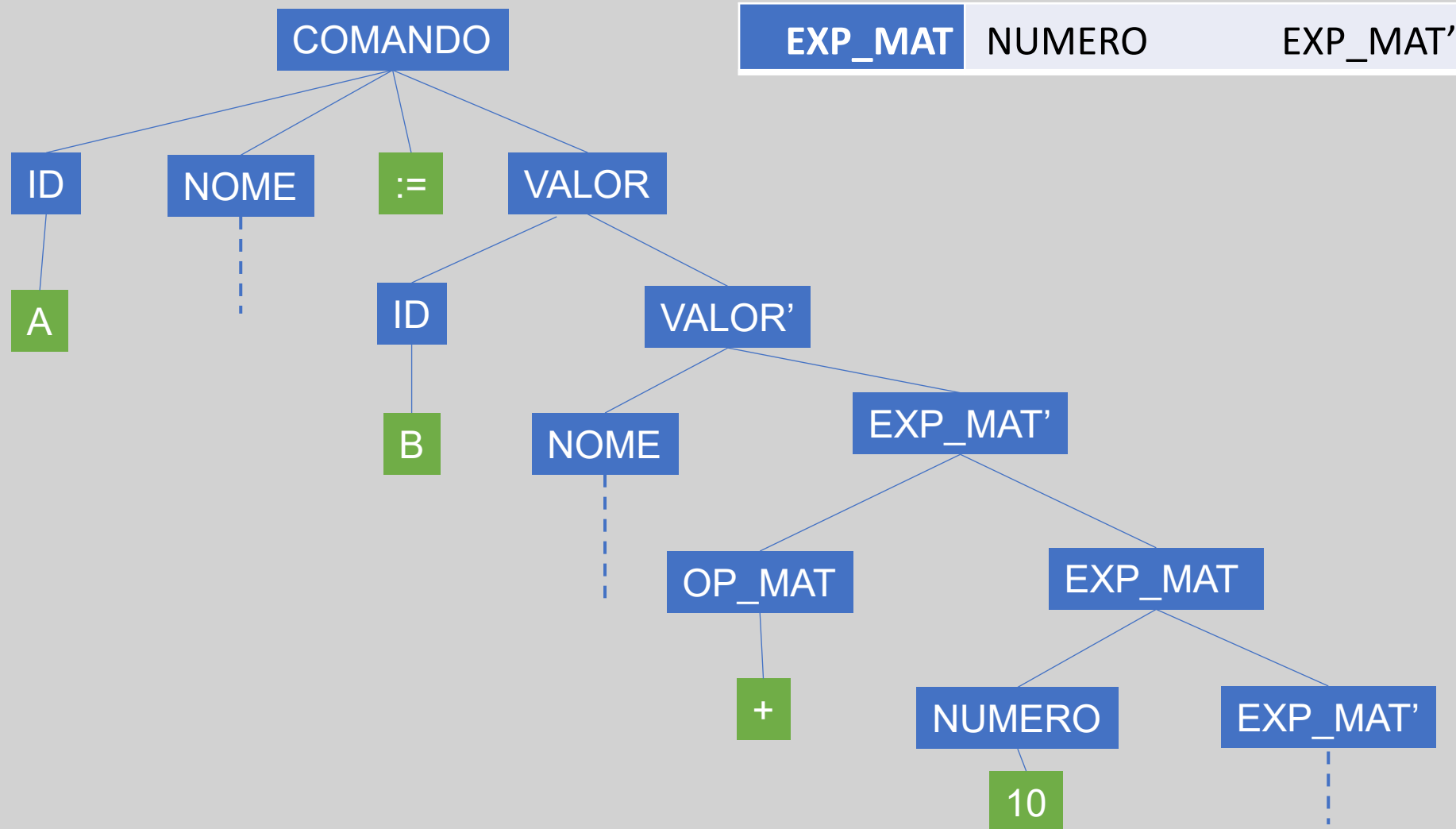
# Exemplo: $A := B + 10$



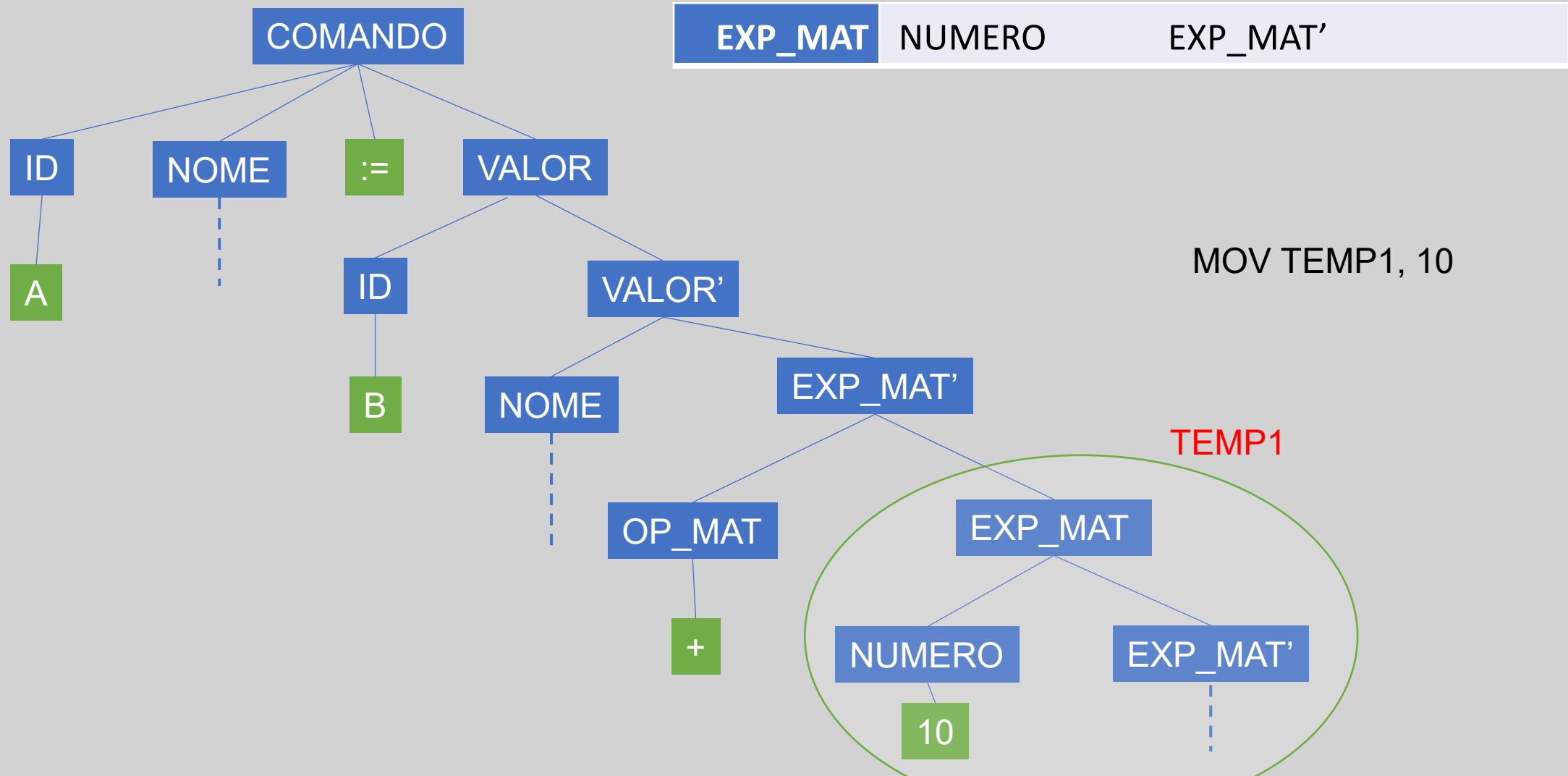
# Exemplo: $A := B + 10$



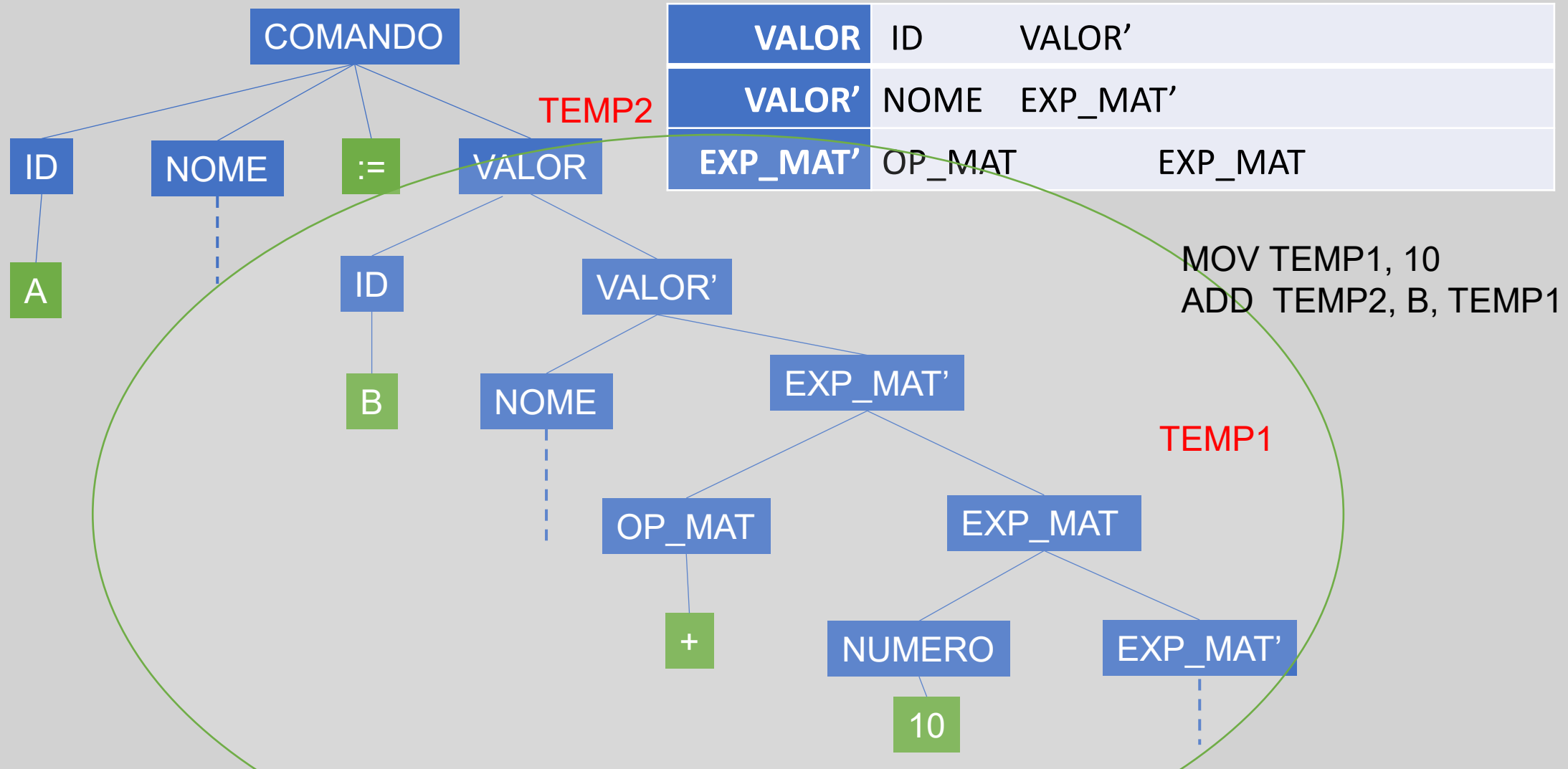
# Exemplo: $A := B + 10$



# Exemplo: $A := B + 10$

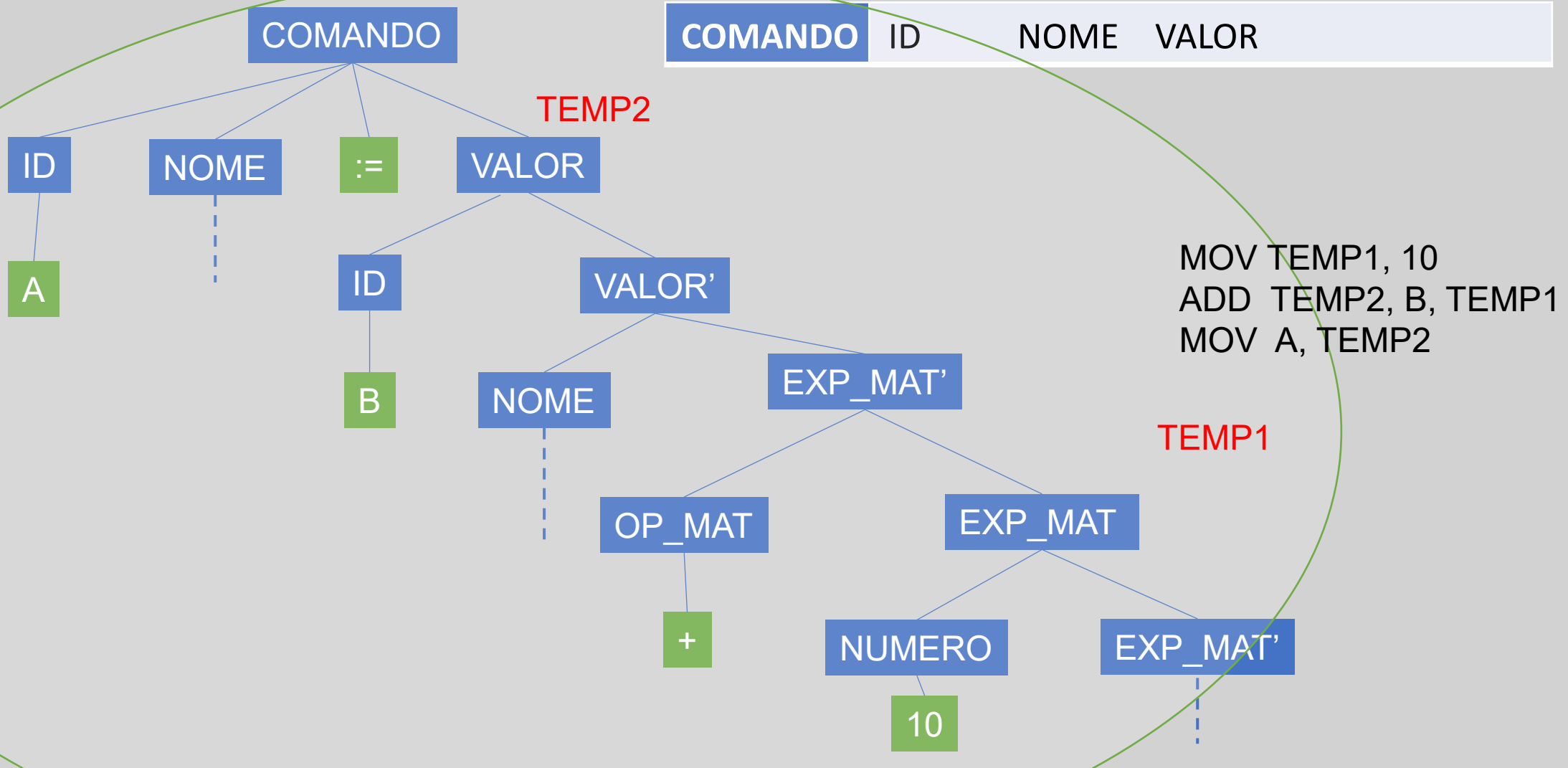


# Exemplo: $A := B + 10$





# Exemplo: $A := B + 10$



# Instrução da regra VALOR

<b>VALOR</b>	ID	VALOR'
<b>VALOR'</b>	NOME	EXP_MAT'
<b>EXP_MAT'</b>	OP_MAT	EXP_MAT

**OP\_MAT TEMP, ID, TEMP\_EXP\_MAT**

<b>VALOR</b>	ID	VALOR'
<b>VALOR'</b>	NOME	EXP_MAT'
<b>EXP_MAT'</b>	€	

**MOV TEMP, ID**

# Instrução da regra VALOR

<b>VALOR</b>	NUMERO	EXP_MAT'
<b>EXP_MAT'</b>	OP_MAT	EXP_MAT

**OP\_MAT TEMP, NUMERO, TEMP\_EXP\_MAT**

<b>VALOR</b>	NUMERO	EXP_MAT'
<b>EXP_MAT'</b>	€	

**MOV TEMP, NUMERO**

# Instrução da regra COMANDO

COMANDO	ID	NOME	:=	VALOR
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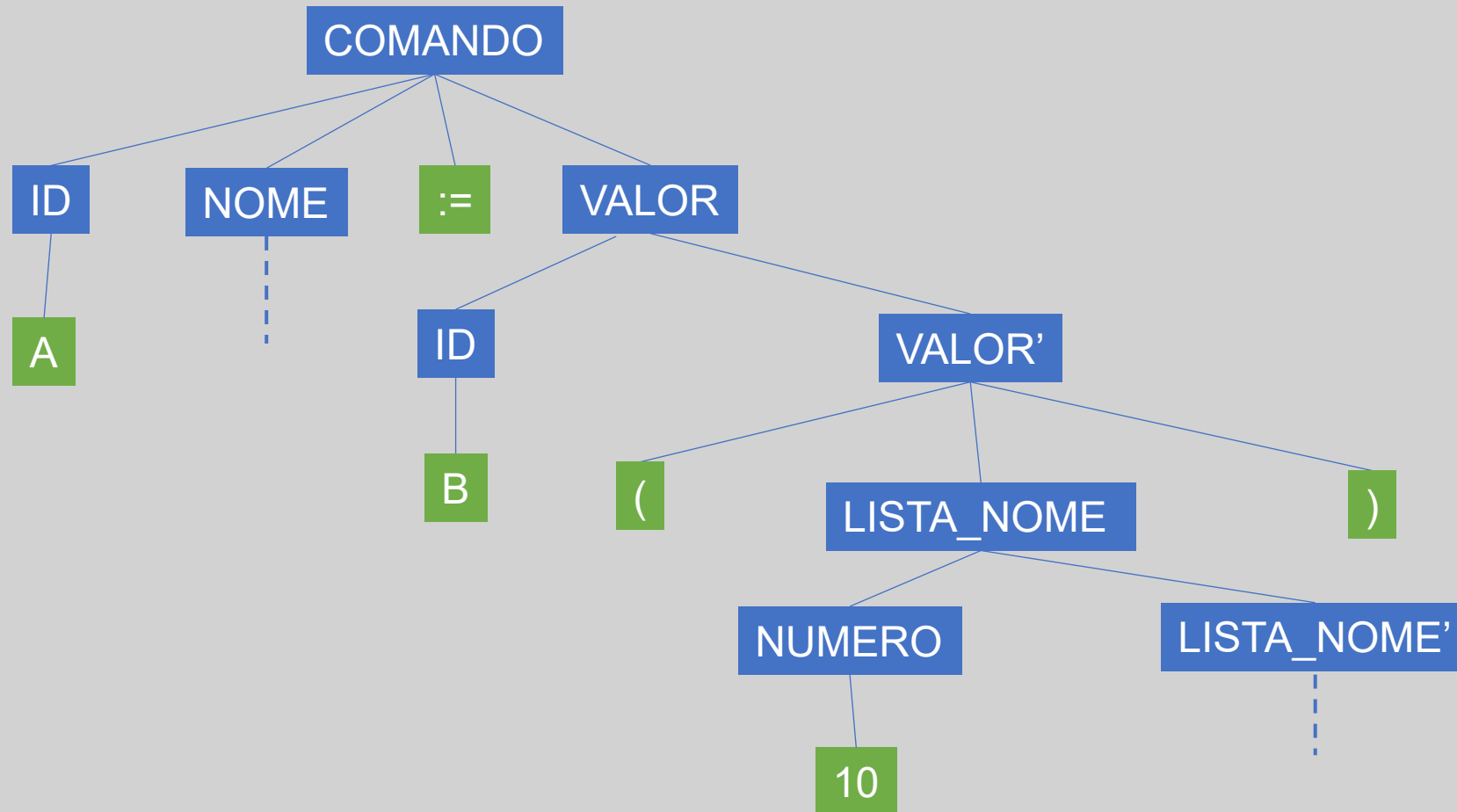
**MOV** ID, TEMP\_VALOR

# Regra LISTA\_NOME

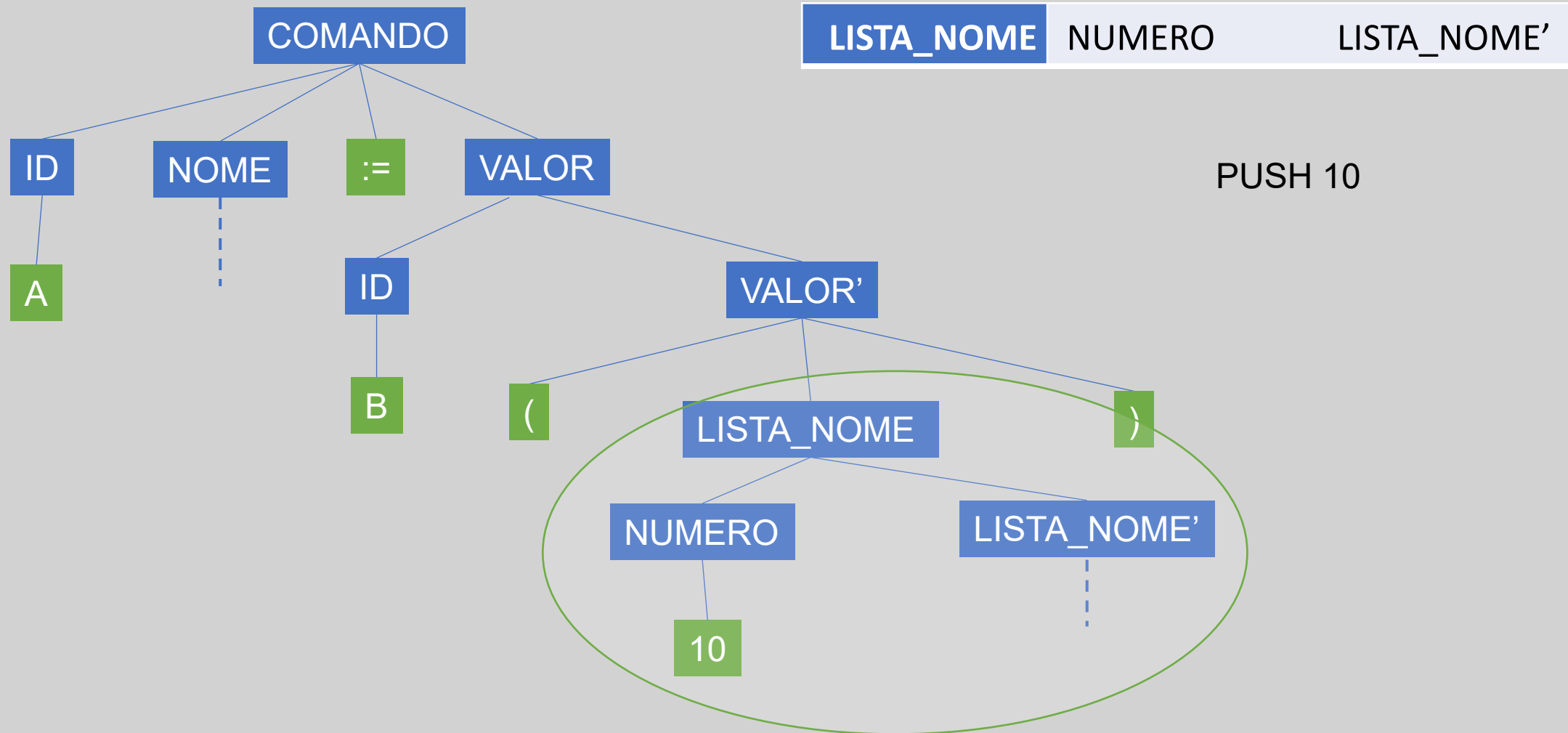
LISTA_NOME	ID	NOME	LISTA_NOME'
	NUMERO	LISTA_NOME'	
	€		

LISTA_NOME'	,	LISTA_NOME
	€	

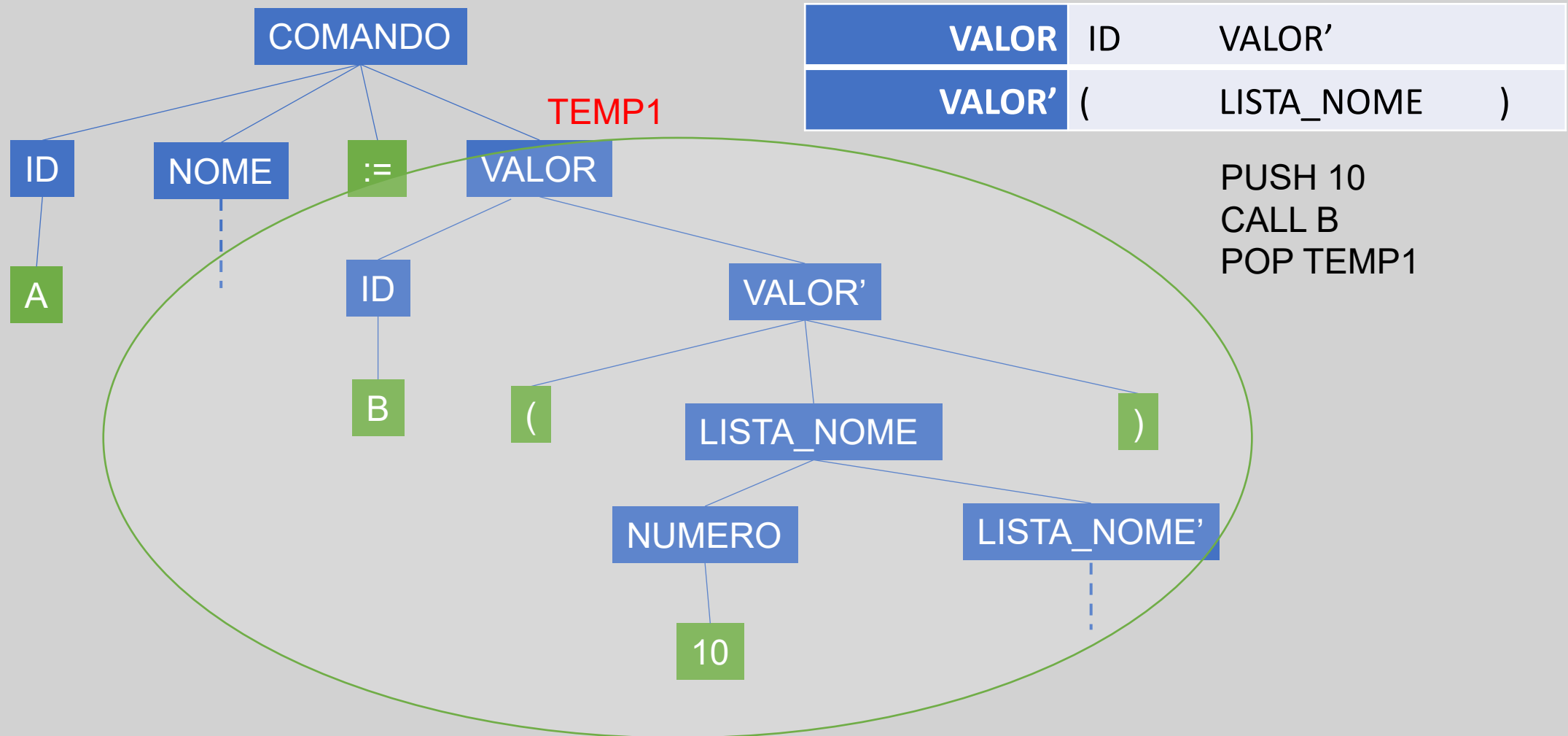
# Exemplo: $A := B(10)$



# Exemplo: $A := B(10)$

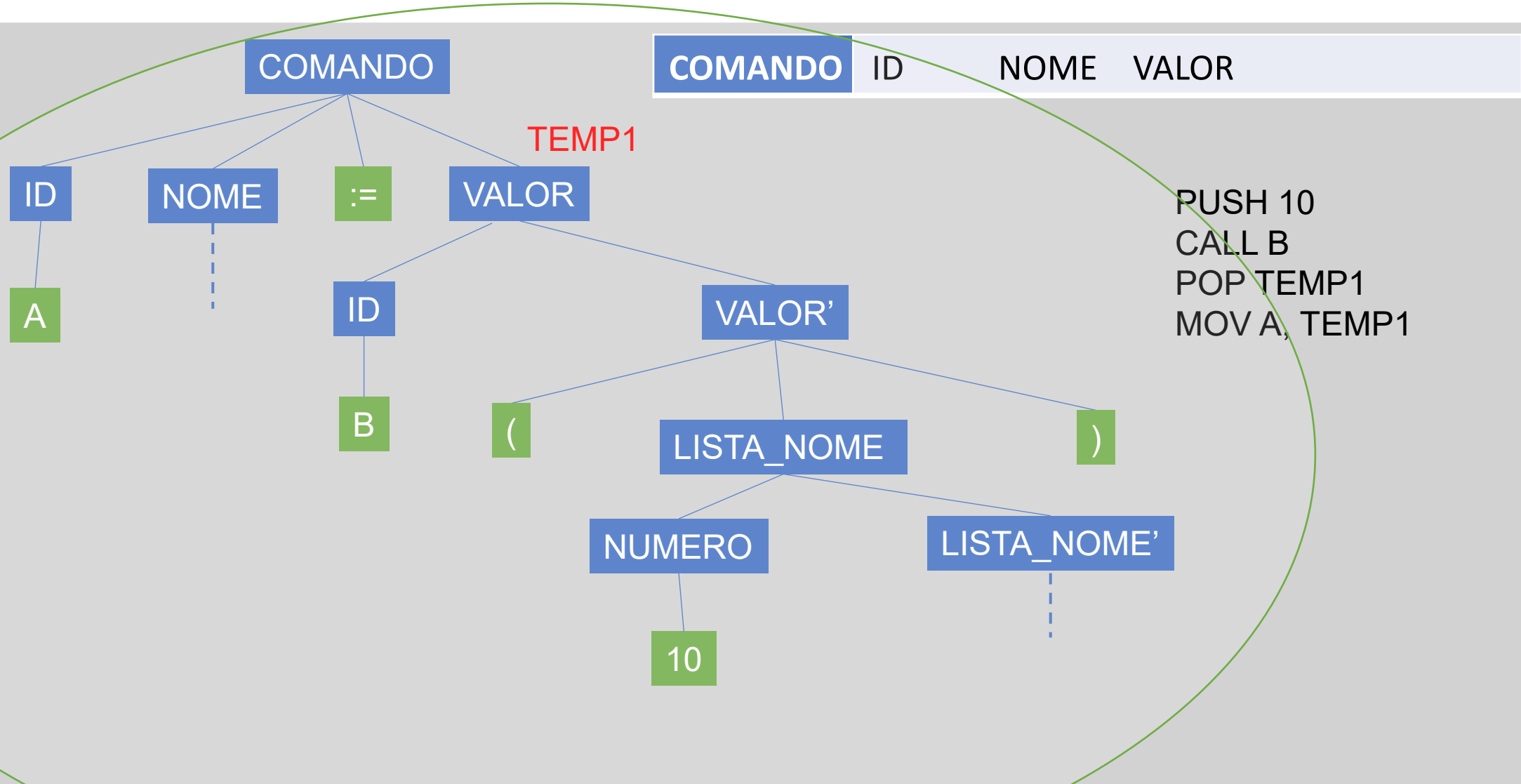


# Exemplo: $A := B(10)$





# Exemplo: $A := B(10)$



# Instruções da regra LISTA\_NOME

<b>LISTA_NOME</b>	ID	NOME	LISTA_NOME'
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**PUSH ID**

<b>LISTA_NOME</b>	NUMERO	LISTA_NOME'
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**PUSH NUMERO**

<b>VALOR</b>	ID	VALOR'
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<b>VALOR'</b>	(	LISTA_NOME	)
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**CALL ID**

**POP TEMP**

# Compiladores – Exemplo Código Intermediário

Eduardo Marques