

1. Gramáticas libres de contexto

1.1

• $(4+5)*3$

$$E \rightarrow T$$

$$T * F$$

$$(E) * \text{number}$$

$$(E + T) * 3$$

$$(T + F) * 3$$

$$(F + \text{number}) * 3$$

$$(\text{number} + 5) * 3$$

$$(4 + 5) * 3$$

• $4 + (a - b) * x$

$$E \rightarrow E + T$$

$$T + T * F$$

$$F + F * \text{identifier}$$

$$\text{number} + (E) * x$$

$$4 + (E - T) * x$$

$$4 + (T - F) * x$$

$$4 + (F - \text{identifier}) * x$$

$$4 + (\text{identifier} - b) * x$$

$$4 + (a - b) * x$$

1.2

$$\langle E \rangle ::= \langle E \rangle + \langle T \rangle \mid \langle E \rangle - \langle T \rangle \mid \langle T \rangle$$
$$\langle T \rangle ::= \langle T \rangle * \langle E \rangle \mid \langle T \rangle / \langle F \rangle \mid \langle F \rangle$$
$$\langle F \rangle ::= (\langle F \rangle \mid \langle \text{identifier} \rangle \mid \langle \text{number} \rangle)$$