CS 311: Computational Structures
Exercise 4

James Hook

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Due: as per syllabus

Let G be the expression, term, factor grammar from Example 2.4 and Exercise 2.1 in Sipser. The sentential symbol is E. The rules are given:

$$
\begin{aligned}
E &\rightarrow E + T \\
  &\mid T \\
T &\rightarrow T \times F \\
  &\mid F \\
F &\rightarrow (E) \\
  &\mid a
\end{aligned}
$$

Show that this grammar generates the string $a \times a + a$ by giving a **leftmost** derivation.