

Quiz 4

Given the following grammar:

- (1) $E \rightarrow T + E$
- (2) $\quad \quad | T$
- (3) $T \rightarrow \text{int} * T$
- (4) $\quad \quad | \text{int}$
- (5) $\quad \quad | (E)$

Give the sequence of shift-reduce actions for the input:

$\text{int} * \text{int} + \text{int}$

stack | input

int * int + int

int | * int + int

int * | int + int

int * int | + int

int * T | + int

T | + int

T + | int

T + int |

T + T |

T + E |

E |

parse action

shift int

shift *

shift int

reduce $T \rightarrow \text{int}$

reduce $T \rightarrow \text{int} * T$

shift +

shift int

reduce $T \rightarrow \text{int}$

reduce $E \rightarrow T$

reduce $E \rightarrow T + E$