

HW 7

1) Removing non reach symbols before non generating may result in deleting symbols that may otherwise be reachable if we remove non generating first it.

In this example there are initially no non reachable variables. However if we get rid of A since it's non generating, as it only leads to itself then  $S \rightarrow AB$  becomes invalid thus making B non reachable.

$$S \rightarrow AB|a$$

$$A \rightarrow aA$$

$$B \rightarrow b$$

2)

$E = \text{Postfix Exp}$

$I = \text{integer}$

$E \rightarrow I$

$E \rightarrow E E +$

$E \rightarrow E E -$

$E \rightarrow E E *$

$E \rightarrow E E /$

3)

Output was 211