

Math 3342

Homework # 7

Chapter 10: 5c, 10f, 11e

Chapter 12: 1j

5c

$a^*b^*c^*$:

$S \rightarrow ABC$

$A \rightarrow aA | \epsilon$

$B \rightarrow bB | \epsilon$

$C \rightarrow cC | \epsilon$

10f

$S \Rightarrow AB \Rightarrow aAB \Rightarrow aaAB \Rightarrow aaB$

$\Rightarrow aabB \Rightarrow aabbB \Rightarrow aabb$

✓

11e

$S \rightarrow [T] | []$

$T \rightarrow D | T, D$

$D \rightarrow 0 | 1 | 2 | \dots | 9$

1j

$\{a^i b^n a^j b^n a^k\}$

$S \rightarrow ATA$

$A \rightarrow aA | \epsilon$

$T \rightarrow bTb | A$