

Math 3342 Homework #5

Chapter 7: #1h, l, q, s

#1h  $\{ x \mid \text{bab occurs in } x \}$   
 $(a+b)^* \text{bab} (a+b)^*$

#1l  $\{ x \text{ ends in } 0001 \text{ or } 1000 \}$   
 $(0+1)^* (0001 + 1000)$

#1q  $\{ \# \text{ of } a\text{'s in } x \text{ is odd} \}$   
 $b^* a b^* (b^* a b^* a b^*)^*$

#1s  $\{ a^n \mid n \text{ is div by } 2, 3, \text{ or } 5 \}$   
 $(aa)^* + (aaa)^* + (aaaaa)^*$