

**CS1231 Review 8**

1. Truth Set. Let  $P(x)$  be  $x \leq 2$ .

If the domain is  $\mathbb{Z}^+$ , then  $T_P = \underline{\{1, 2\}}$ .

If the domain is  $\mathbb{R}$ , then  $T_P = \underline{(-\infty, 2]}$ .

2. Recall  $T_{\neg P} = \overline{T_P}$ ,  $T_{P \wedge Q} = T_P \cap T_Q$ ,  $T_{P \vee Q} = T_P \cup T_Q$ .

Prove  $T_{P \wedge \neg Q} = T_P \cap \overline{T_Q}$ .

$$T_{P \wedge \neg Q} = T_P \cap T_{\neg Q} = T_P \cap \overline{T_Q}$$

3.  $U = \{\underline{2}, 3, \underline{5}\}$ . The bit string of  $A$  is 101. Then  $A = \underline{\{2, 5\}}$ .

$A$     1 0 1