

$$U = \{x: x \in \mathbb{Z} \text{ and } 0 \leq x < 20\}; A = \{0, 2, 4, 6, \dots\}$$

$$B = \{1, 3, 5, \dots\}$$

$$2. A \cap \overline{B} = \{0, 2, 4, 6, 8, 10, 12, 14, 16, 18, \dots\}$$

$$\overline{A \cap B} = \{0, \dots, 19\} \text{ All numbers}$$

$$\overline{A \cup B} = \{\emptyset\} \text{ nothing in } A \text{ or } B \text{ (in } U)$$

$$\overline{A \oplus B} = \{\emptyset, \{\emptyset\}\} \text{ overlap and Union (Universal)}$$