

Identify the Class of Given Languages (Reg., C.F.L., Not C.F.L.)

$$L_1 = \{ww^R \mid w \in \{a, b\}^*\}$$

$$L_2 = \{ww^R \mid w \in \{a, b\}^+\}$$

$$L_3 = \{wxw \mid w, x \in \{a, b\}^*\}$$

$$L_4 = \{wxw \mid w, x \in \{a, b\}^+\}$$

$$L_5 = \{wxw^R \mid w, x \in \{a, b\}^*\}$$

$$L_6 = \{wxw^R \mid w, x \in \{a, b\}^+\}$$

$$L_7 = \{wxw^R \mid w \in \{a, b\}^*, x \notin \{a, b\}\}$$

$$L_8 = \{wxw^R \mid w \in \{a, b\}^+, x \notin \{a, b\}\}$$

$$L_9 = \{ww \mid w \in \{a, b\}^*\}$$

$$L_{10} = \{ww \mid w \in \{a, b\}^+\}$$

$$L_{11} = \{wxwy \mid w, x, y \in \{a, b\}^+\}$$

$$L_{12} = \{xwyw \mid w, x, y \in \{a, b\}^+\}$$

$$L_{13} = \{wxyw \mid w, x, y \in \{a, b\}^+\}$$

$$L_{14} = \{xww \mid w, x \in \{a, b\}^*\}$$

$$L_{15} = \{xww \mid w, x \in \{a, b\}^+\}$$

$$L_{16} = \{xww^R \mid w, x \in \{a, b\}^+\}$$