

1.

$S \rightarrow ASA \mid AC \mid BSB \mid BD$

$A \rightarrow a$

$B \rightarrow b$

$C$  &  $D$  are not defined so remove them

$S \rightarrow ASA \mid BSB$

$A \rightarrow a$

$B \rightarrow b$

2.

$$S \rightarrow aAD$$

$$A \rightarrow aB \mid bAB$$

$$B \rightarrow b$$

$$D \rightarrow d$$

$$S \rightarrow aAD$$

$$A \rightarrow aB \mid bAB$$

$$B \rightarrow b$$

$$D \rightarrow d$$

$$X \rightarrow a$$

$$Y \rightarrow b$$

$$S \rightarrow XAD$$

$$A \rightarrow XB \mid YAB$$

$$B \rightarrow b$$

$$D \rightarrow d$$

$$X \rightarrow a$$

$$Y \rightarrow b$$

$$Z \rightarrow XA$$

$$U \rightarrow YA$$

$$S \rightarrow ZD$$

$$A \rightarrow XB \mid UB$$

$$B \rightarrow b$$

$$D \rightarrow d$$

$$X \rightarrow a$$

$$Y \rightarrow b$$

$$Z \rightarrow XA$$

$$U \rightarrow YA$$