

Activity 6.2

Convert the following Context Free Grammar to Chomsky's Normal Form (CNF)

$$S \rightarrow ASA$$

$$S \rightarrow aB$$

$$A \rightarrow B$$

$$A \rightarrow S$$

$$A \rightarrow ?$$

$$B \rightarrow b$$

$$B \rightarrow ?$$

$$5) S \rightarrow AZ | xy | b$$

$$A \rightarrow b | AZ | xy$$

$$B \rightarrow b$$

$$Z \rightarrow A$$

$$x \rightarrow S$$

$$y \rightarrow S$$

$$1) S \rightarrow ASA | AS | SA | A | aB$$

$$A \rightarrow B | S$$

$$B \rightarrow b$$

$$2) S \rightarrow ASA | aB | b$$

$$A \rightarrow b | ASA | aB$$

$$B \rightarrow b$$

$$3) S \rightarrow AS1 | aB | b$$

$$A \rightarrow b | AS1 | aB$$

$$B \rightarrow b$$

$$S1 \rightarrow SA$$

$$4) S \rightarrow AS1 | aB | b$$

$$A \rightarrow b | AS1 | aB$$

$$B \rightarrow b$$

$$S1 \Rightarrow SA$$