Table 1-3 Rules of Block Diagram Algebra

| Tuble 1-9 Rules of | | |
|--------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| | Original Block Diagrams | Equivalent Block Diagrams |
| | $ \begin{array}{c c} A & & A-B & A-B+C \\ B & & C & A-B+C \end{array} $ | $ \begin{array}{c c} A & A+C & A-B+C \\ C & B & A-B+C \end{array} $ |
| | $ \begin{array}{c c} A & C & A-B+C \\ \hline B & A & A-B+C \end{array} $ | $ \begin{array}{c c} A & & C & \\ A-B & & A-B+C \end{array} $ |
| 3 | $A \qquad G_1 \qquad AG_1 \qquad G_2 \qquad AG_1G_2$ | $ \begin{array}{c c} A & G_2 \\ \hline G_1 & AG_1G_2 \end{array} $ |
| 4 | $A = G_1 \qquad AG_1 G_2 \qquad AG_1 G_2$ | $\xrightarrow{A} \qquad \qquad G_1G_2 \qquad \qquad AG_1G_2$ |
| 5 | $ \begin{array}{c c} A & G_1 & AG_1 + AG_2 \\ \hline G_2 & AG_2 \end{array} $ | $\xrightarrow{A} G_1 + G_2$ |
| 6 | $ \begin{array}{c c} AG & AG - B \\ B & B \end{array} $ | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ |
| 7 | $ \begin{array}{c c} A & B & AG-BG \\ \hline B & AG-BG \\ \hline B & AG-BG \end{array} $ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| 8 | $ \begin{array}{c c} A & G \\ \hline AG \\ AG \end{array} $ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| 9 | $\begin{array}{c c} A & & AG \\ \hline & A & \\ \hline & A & \\ \hline \end{array}$ | $ \begin{array}{c c} A & G & AG \\ \hline AG & \overline{G} & A \end{array} $ |
| 10 | $ \begin{array}{c c} A & A-B \\ \hline B & A-B \end{array} $ | $A \longrightarrow A-B$ $A \longrightarrow A-B$ |
| 11 | $ \begin{array}{c c} AG_1 & AG_1 \\ \hline G_2 & AG_2 \end{array} $ | $ \begin{array}{c c} AG_1 & AG_1 + AG_2 \\ \hline G_2 & G_1 \end{array} $ |
| 12 | $A \longrightarrow G_1 \longrightarrow B$ $G_2 \longrightarrow G_2$ | $\frac{A}{G_2} + G_1 + G_2$ |
| 13 | $A \longrightarrow G_1 \longrightarrow B$ $G_2 \longrightarrow G_2$ | https://controlautomaticoeducacion.com/ $ \frac{A}{1+G_1G_2} $ |
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