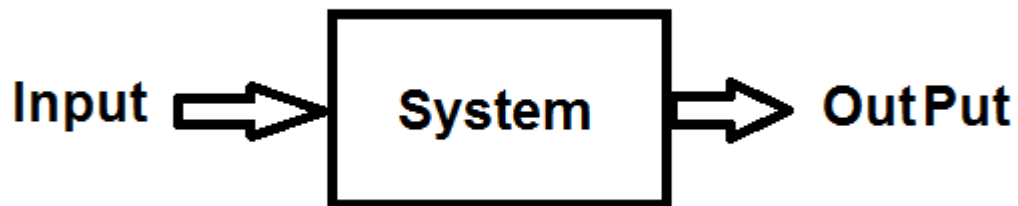
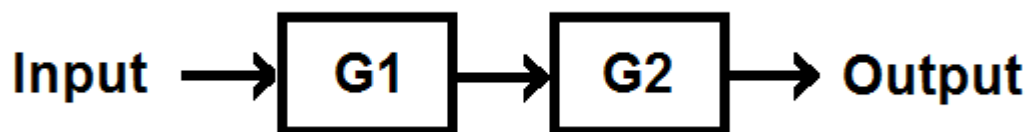


Block Diagram Reduction

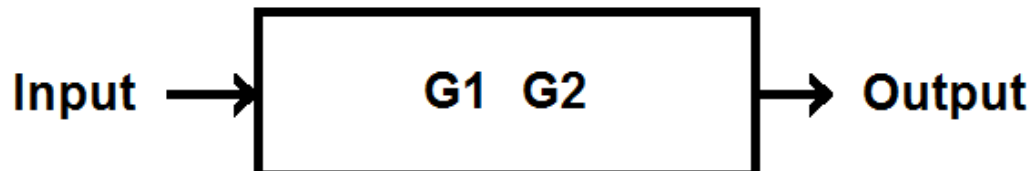


Rule 1: Cascaded Element

In this rule we are combine all cascades blocks as shown below.

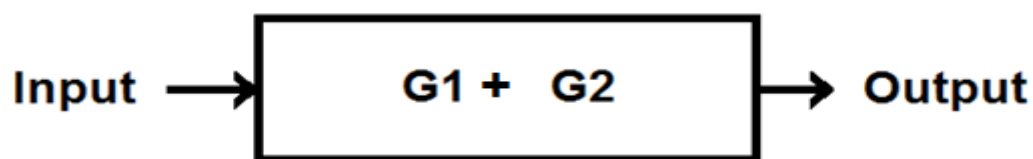
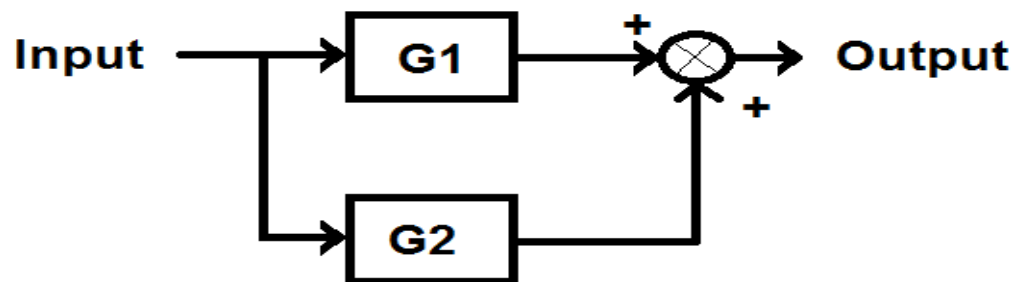


Become



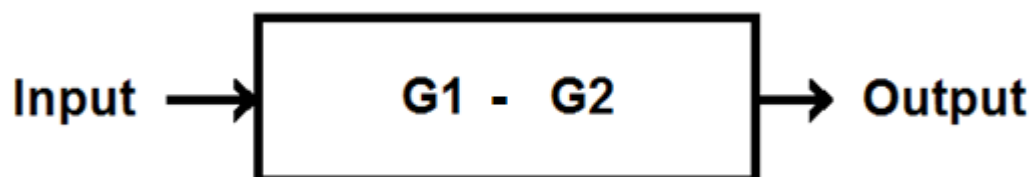
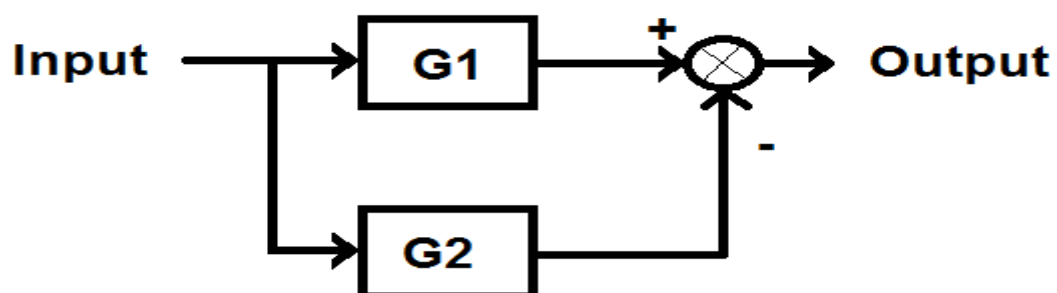
Rule 2: Addition or Subtraction

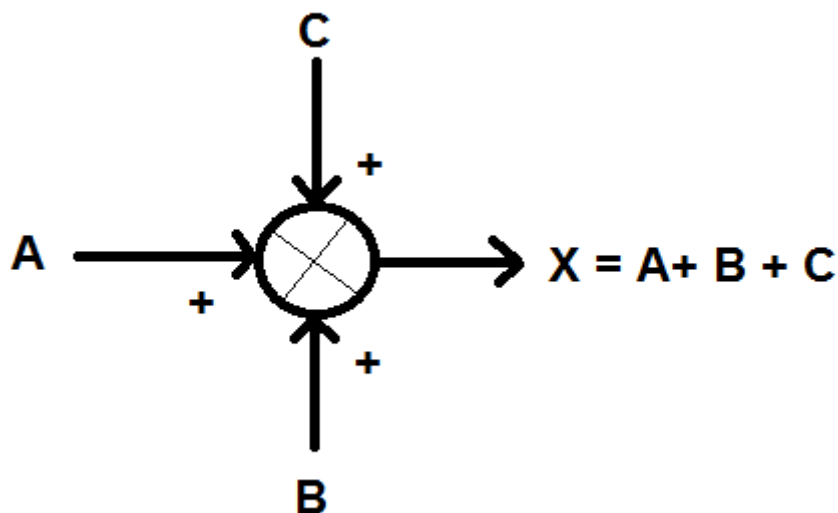
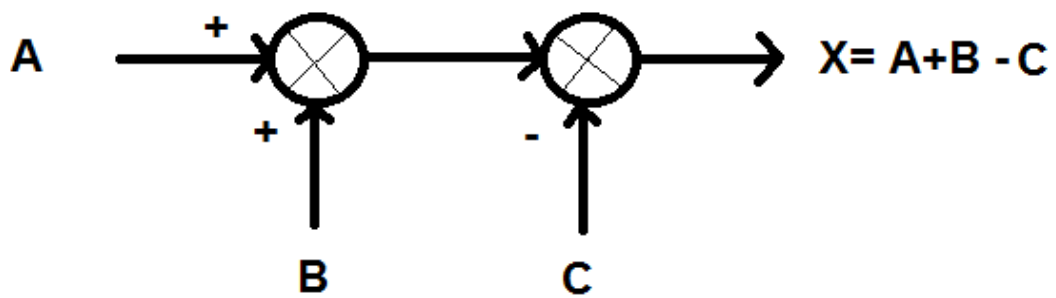
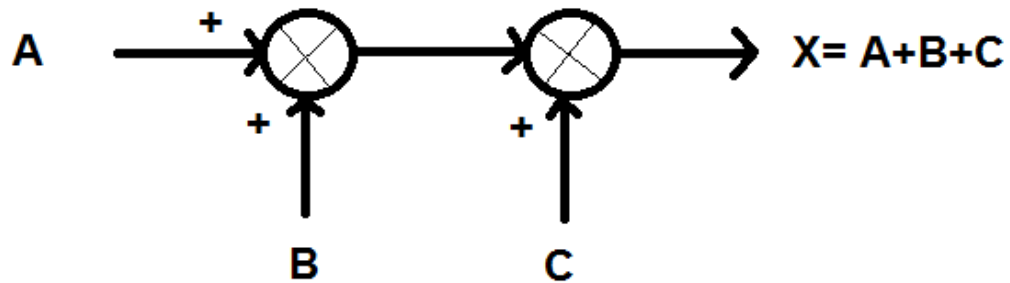
In this rule we are add the cascades blocks as shown below.

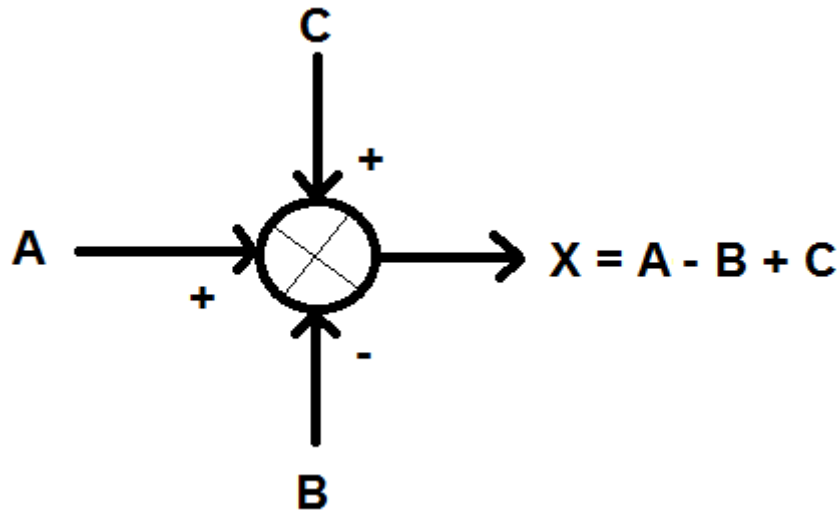


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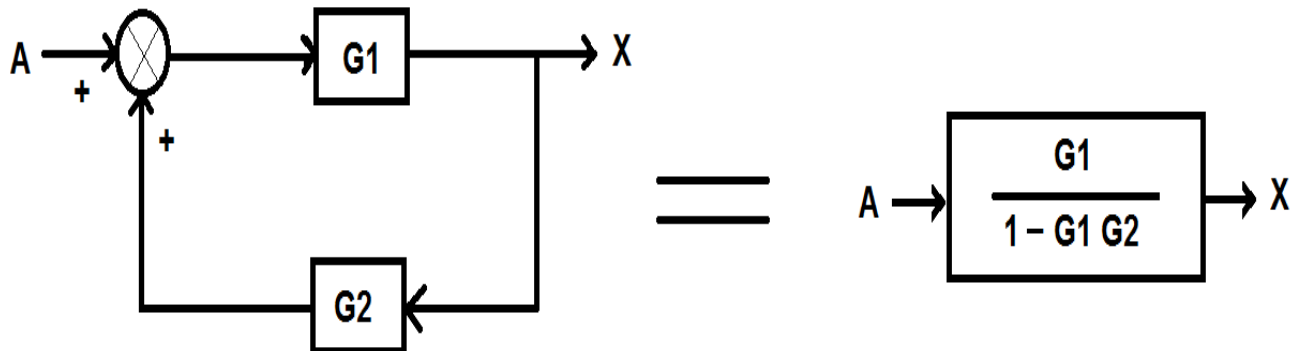
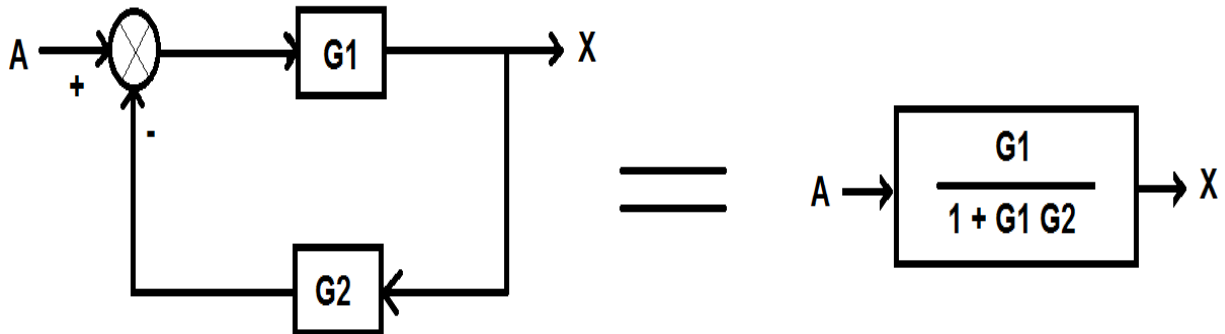
In this rule we are add the cascades blocks as shown below.







Rule 3: Feed Back Rule

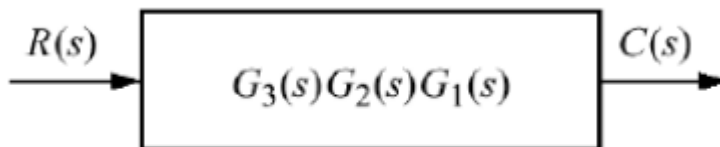


Example 1: simplify the diagram below



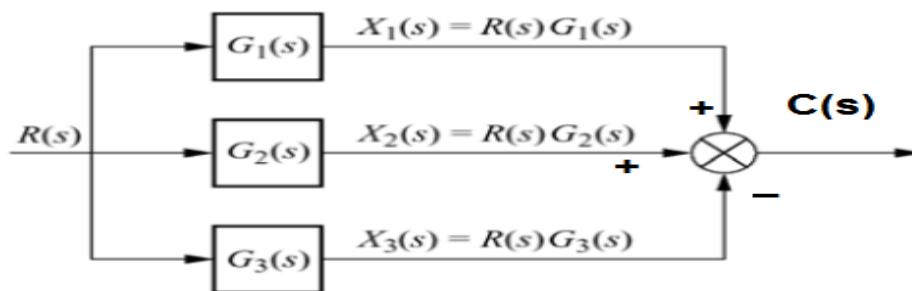
Answer

The system are connected cascaded, therefore We can simply the diagram by multiply the systems



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Example 2: simplify the diagram below



Answer

The systems are connected in parallel therefore, We can simply the diagram by add or sub the systems according to the sign of the signal.

