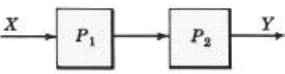
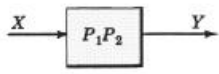
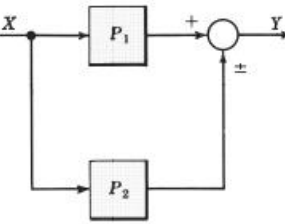
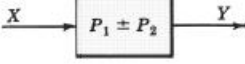
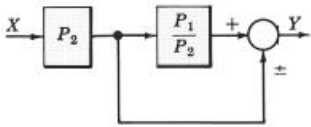
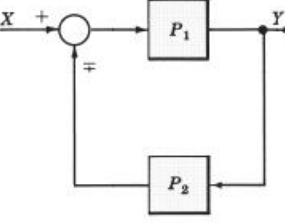
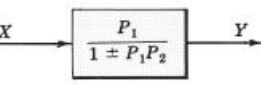
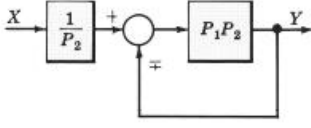
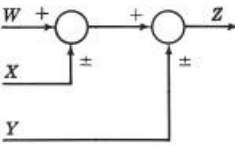
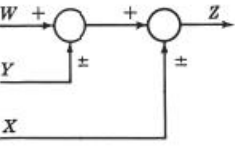
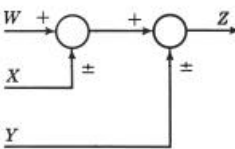
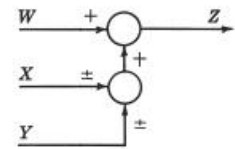
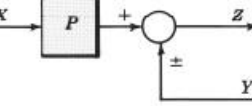
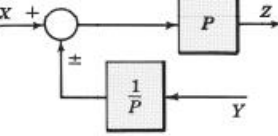
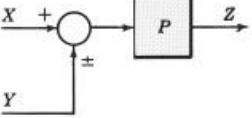
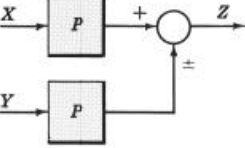
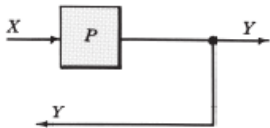
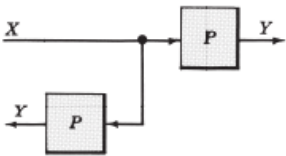
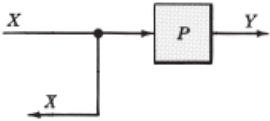
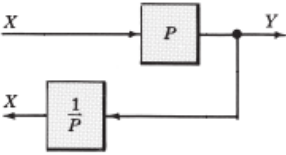
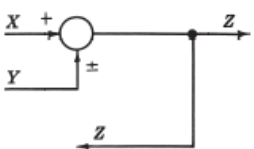
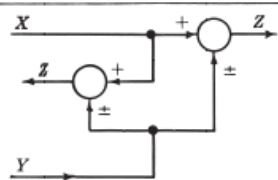
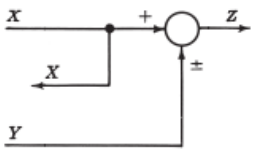
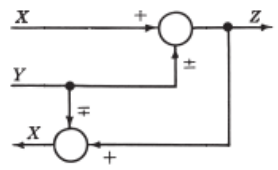


Transformation		Equation	Block Diagram	Equivalent Block Diagram
1	Combining Blocks in Cascade	$Y = (P_1 P_2)X$		
2	Combining Blocks in Parallel; or Eliminating a Forward Loop	$Y = P_1 X \pm P_2 X$		
3	Removing a Block from a Forward Path	$Y = P_1 X \pm P_2 X$		
4	Eliminating a Feedback Loop	$Y = P_1 (X \mp P_2 Y)$		
5	Removing a Block from a Feedback Loop	$Y = P_1 (X \mp P_2 Y)$		
6a	Rearranging Summing Points	$Z = W \pm X \pm Y$		
6b	Rearranging Summing Points	$Z = W \pm X \pm Y$		
7	Moving a Summing Point Ahead of a Block	$Z = PX \pm Y$		
8	Moving a Summing Point Beyond a Block	$Z = P[X \pm Y]$		

Transformation		Equation	Block Diagram	Equivalent Block Diagram
9	Moving a Takeoff Point Ahead of a Block	$Y = PX$		
10	Moving a Takeoff Point Beyond a Block	$Y = PX$		
11	Moving a Takeoff Point Ahead of a Summing Point	$Z = X \pm Y$		
12	Moving a Takeoff Point Beyond a Summing Point	$Z = X \pm Y$		

$$\frac{d^n y}{dt^n} + a_{n-1} \frac{d^{n-1} y}{dt^{n-1}} + \dots + a_1 \frac{dy}{dt} + a_0 y = \beta_0 u + \beta_1 \frac{du}{dt} + \dots + \beta_m \frac{d^m u}{dt^m}$$

