

表 2.6 (1) ブロック線図の基本変換

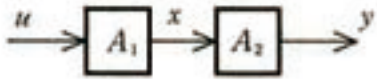
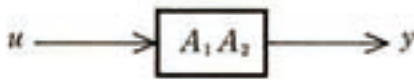
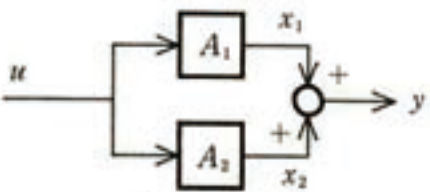
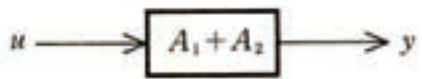
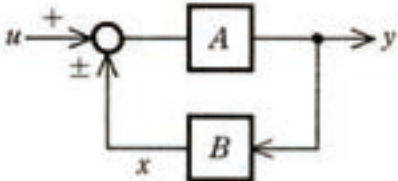

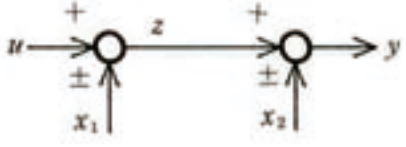
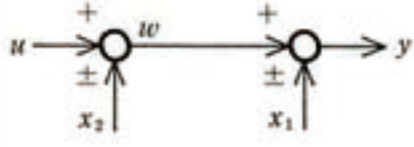

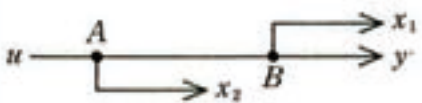
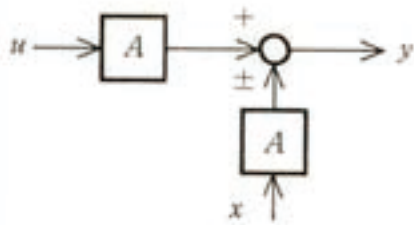
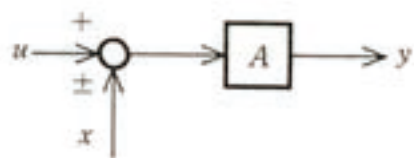
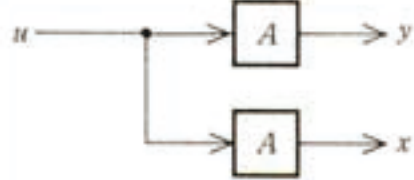

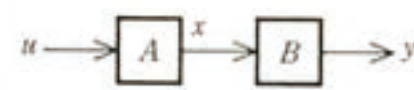
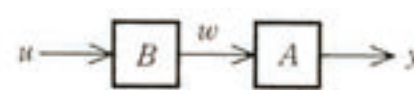

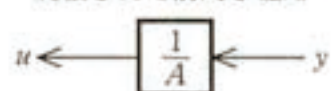

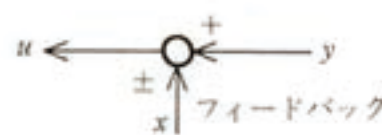
		I	II
1	直列接続 (カスケード)	 $x = A_1 u$ $y = A_2 x$	 <p>x を消去して</p> $y = A_1 A_2 u$
2	並列接続	 $x_1 = A_1 u, \quad x_2 = A_2 u$ $y = x_1 + x_2$	 <p>x_1, x_2 を消去して</p> $y = (A_1 + A_2) u$
3	フィードバック接続	 $y = A(u \pm x)$ $x = B y$	 <p>x を消去して</p> $y = \frac{A}{1 \pm AB} u$
4	加算点の交換	 $z = u \pm x_1, \quad y = z \pm x_2$	 $w = u \pm x_2, \quad y = w \pm x_1$
5	分岐点の交換	 $x_1 = u, \quad x_2 = u, \quad y = u$	 $x_1 = u, \quad x_2 = u, \quad y = u$

表 2.6 (2) ブロック線図の基本変換

		I	II
6	加算点の移動	 $y = Au \pm Ax$	 $y = A(u \pm x)$
7	分岐点の移動	 $y = Au, \quad x = Au$	 $y = Au, \quad x = y$
8	伝達要素の交換	 $x = Au, \quad y = Bx$	 $w = Bu, \quad y = Aw$
9	伝達関数における反転	<p>前向き経路</p>  $y = Au$	<p>反転された前向き経路</p>  $u = \frac{1}{A}y$
10	加算点における反転	 $y = u \mp x$	<p>反転された前向き経路</p>  $u = y \pm x$