

Instruction	Operand	description	operating	Flag cycle	
Jump instructions (cont.)					
CPSE	R_d, R_r	That jump is equal to	If $(R_d - R_r) PC \leftarrow PC + 2$ or 3	None	1/2
CP	R_d, R_r	Compare	$R_d - R_r$	Z, N, V, C, H	1
CPC	R_d, R_r	Carry compare	$R_d - R_r - C$	Z, N, V, C, H	1
CPI	R_d, K	Compared with the immediate	$R_d - K$	Z, N, V, C, H	1
SBRC	R_r, b	Bit 0 Skip next instruction	If $(R_r(b) = 0) PC \leftarrow PC + 2$ or 3	None	1/2
SBRS	R_r, b	Bit 1 Skip next instruction	If $(R_r(b) = 1) PC \leftarrow PC + 2$ or 3	None	1/2
SBIC	P, b	I / O Bit 0 Skip next instruction	If $(P(b) = 0) PC \leftarrow PC + 2$ or 3	None	1/2
SBIS	P, b	I / O Bit 1 Skip next instruction	If $(P(b) = 1) PC \leftarrow PC + 2$ or 3	None	1/2
BRBS	s, k	State marked 1 That jump	If $(SREG(S) = 1) PC \leftarrow PC + K + 1$	None	1/2
BRBC	s, k	State marked 0 That jump	If $(SREG(S) = 0) PC \leftarrow PC + K + 1$	None	1/2
BREQ	k	That jump is equal to	if $(Z = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRNE	k	Range will jump	if $(Z = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRCS	k	Carry Jump	if $(C = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRCC	k	Not Carry Jump	if $(C = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRSH	k	Not less than jump	if $(C = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRLO	k	Less than jump	if $(C = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRMI	k	Negative jump	if $(N = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRPL	k	As a regular jump	if $(N = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRGE	k	Signed i.e. jump is not less than	if $(N \oplus V = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRLT	k	Signed less than 0 That jump	if $(N \oplus V = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRHS	k	Half-carry is 1 Jump	if $(H = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRHC	k	Half-carry is 0 Jump	if $(H = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRTS	k	T Set Jump	if $(T = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRTC	k	T Clear Jump	if $(T = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRVS	k	Overflow jump	if $(V = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRVC	k	Does not overflow jump	if $(V = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRIE	k	Global Interrupt Enable jump	if $(I = 1)$ then $PC \leftarrow PC + k + 1$	None	1/2
BRID	k	Global Interrupt Disable Jump	if $(I = 0)$ then $PC \leftarrow PC + k + 1$	None	1/2
Data Transfer Instructions					
MOV	R_d, R_r	Move data between registers	$R_d \leftarrow R_r$	None	1
MOVW	R_d, R_r	Moving a data word	$R_d + 1: R_d \leftarrow R_r + 1: R_r$	None	1
LDI	R_d, K	Immediate loading	$R_d \leftarrow K$	None	1
LD	R_d, X	Indirect load	$R_d \leftarrow (X)$	None	1/2
LD	$R_d, X +$	Indirect load, the address is incremented	$R_d \leftarrow (X), X \leftarrow X + 1$	None	1/2
LD	$R_d, -X$	Address decrement, indirect load	$X \leftarrow X - 1, R_d \leftarrow (X)$	None	1/2
LD	R_d, Y	Indirect load	$R_d \leftarrow (Y)$	None	1/2
LD	$R_d, Y +$	Indirect load, the address is incremented	$R_d \leftarrow (Y), Y \leftarrow Y + 1$	None	1/2
LD	$R_d, -Y$	Address decrement, indirect load	$Y \leftarrow Y - 1, R_d \leftarrow (Y)$	None	1/2
LDD	$R_d, Y + q$ Indirect with offset loading		$R_d \leftarrow (Y + q)$	None	1/2
LD	R_d, Z	Indirect load	$R_d \leftarrow (Z)$	None	1/2