Z80 instruction set

Instruction	T(Z80)		Opcode	Size
ADC A,(HL)	7	2	8E	1
ADC A,(IX+o)	19	5	DD 8E oo	3
ADC A,(IY+o)	19	5	FD 8E oo	3
ADC A,n	7	2	CE nn	2
ADC A,r	4	1	88+r	1
ADC A,IXp	8	2	DD 88+p	2
ADC A,IYq	8	2	FD 88+q	2
ADC HL,BC	15	2	ED 4A	2
ADC HL,DE	15	2	ED 5A	2
ADC HL,HL	15	2	ED 6A	2
ADC HL,SP	15	2	ED 7A	2
ADD A,(HL)	7	2	86	1
ADD A,(IX+o)	19	5	DD 86 oo	3
ADD A,(IY+o)	19	5	FD 86 oo	3
ADD A,n	7	2	C6 nn	2
ADD A,r	4	1	80+r	1
ADD A,IXp	8	2	DD 80+p	2
ADD A,IYq	8	2	FD 80+q	2
ADD HL,BC	11	1	09	1
ADD HL,DE	11	1	19	1
ADD HL,HL	11	1	29	1
ADD HL,SP	11	1	39	1
ADD IX,BC	15	2	DD 09	2
ADD IX,DE	15	2	DD 19	2
ADD IX,IX	15	2	DD 29	2
ADD IX,SP	15	2	DD 39	2
ADD IY,BC	15	2	FD 09	2
ADD IY,DE	15	2	FD 19	2
ADD IY,IY	15	2	FD 29	2
ADD IY,SP	15	2	FD 39	2
AND (HL)	7	2	A6	1
AND (IX+o)	19	5	DD A6 oo	3
AND (IY+o)	19	5	FD A6 oo	3
AND n	7	2	E6 nn	2
AND r	4	1	A0+r	1
AND IXp	8	2	DD A0+p	2
AND IYq	8	2	FD A0+q	2
BIT b,(HL)	12	3	CB 46+8*b	2
BIT b,(IX+o)	20	5	DD CB oo 46+8*b	4
BIT b,(IY+o)	20	5	FD CB oo 46+8*b	4
BIT b,r	8	2	CB 40+8*b+r	2
CALL nn	17	5	CD nn nn	3
CALL C,nn	17/10	5/3	DC nn nn	3
CALL M,nn	17/10	5/3	FC nn nn	3
CALL NC,nn	17/10	5/3	D4 nn nn	3
CALL NZ,nn	17/10	5/3	C4 nn nn	3
CALL P,nn	17/10	5/3	F4 nn nn	3
CALL PE,nn	17/10	5/3	EC nn nn	3
CALL PO,nn	17/10	5/3	E4 nn nn	3
CALL Z,nn	17/10	5/3	CC nn nn	3
CCF	4	1	3F	1
CP (HL)	7	2	BE	1
CP (IX+o)	19	5	DD BE oo	3
CP (IY+o)	19	5	FD BE oo	3
CP n	7	2	FE nn	2
CP r	4	1	B8+r	1
CP IXp	8	2	DD B8+p	2
CP IYq	8	2	FD B8+q	2
CPD	16	4	ED A9	2
CPDR	21/16	4	ED B9	2
CPI	16	4	ED A1	2
CPIR	21/16	4	ED B1	2
CPL	4	1	2F	1
DAA	4	1	27	1
DEC (HL)	11	4	35	1
DEC (IX+o)	23	7	DD 35 oo	3
DEC (IY+o)	23	7	FD 35 oo	3
DEC A	4	1	3D	1
DEC B	4	1	05	1
DEC BC	6	1	0B	1
DEC C	4	1	0D	1
DEC D	4	1	15	1
DEC DE	6	1	1B	1
DEC E	4	1	1D	1
DEC H	4	1	25	1
DEC HL	6	1	2B	1
DEC IX	10	2	DD 2B	2
DEC IY	10	2	FD 2B	2
DEC IXp	8	2	DD 05+8*p	2
DEC IYq	8	2	FD 05+8*q	2
DEC L	4	1	2D	2
DEC SP	6	1	3B	1
DI	4	2	F3	1
DJNZ o	13/8	2	10 oo	2
EI	4	1	FB	1
EX (SP),HL	19	5	E3	1
EX (SP),IX	23	6	DD E3	2
EX (SP),IY	23	6	FD E3	2
EX AF,AF'	4	1	08	1
EX DE,HL	4	1	EB	1
EXX	4	1	D9	1
HALT	4	2	76	1
IM 0	8	3	ED 46	2
IM 1	8	3	ED 56	2
IM 2	8	3	ED 5E	2
IN A,(C)	12	3	ED 78	2
IN A,(n)	11	3	DB nn	2
IN B,(C)	12	3	ED 40	2
IN C,(C)	12	3	ED 48	2
IN D,(C)	12	3	ED 50	2
IN E,(C)	12	3	ED 58	2
IN H,(C)	12	3	ED 60	2
IN L,(C)	12	3	ED 68	2
IN F,(C)	12	3	ED 70	3
INC (HL)	11	4	34	1
INC (IX+o)	23	7	DD 34 oo	3
INC (IY+o)	23	7	FD 34 oo	3
INC A	4	1	3C	1
INC B	4	1	04	1
INC BC	6	1	03	1
INC C	4	1	0C	1
INC D	4	1	14	1
INC DE	6	1	13	1
INC E	4	1	1C	1
INC H	4	1	24	1
INC HL	6	1	23	1
INC IX	10	2	DD 23	2
INC IY	10	2	FD 23	2
INC IXp	8	2	DD 04+8*p	2
INC IYq	8	2	FD 04+8*q	2
INC L	4	1	2C	1
INC SP	6	1	33	1
IND	16	4	ED AA	2
INDR	21/16	4/3	ED BA	2
INI	16	4	ED A2	2
INIR	21/16	4/3	ED B2	2
JP nn	10	3	C3 nn nn	3
JP (HL)	4	1	E9	1
JP (IX)	8	2	DD E9	2
JP (IY)	8	2	FD E9	2
JP C,nn	10	3	DA nn nn	3
JP M,nn	10	3	FA nn nn	3
JP NC,nn	10	3	D2 nn nn	3
JP NZ,nn	10	3	C2 nn nn	3
JP P,nn	10	3	F2 nn nn	3
JP PE,nn	10	3	EA nn nn	3
JP PO,nn	10	3	E2 nn nn	3
JP Z,nn	10	3	CA nn nn	3
JR o	12	3	18 oo	2
JR C,o	12/7	3/2	38 oo	2
JR NC,o	12/7	3/2	30 oo	2
JR NZ,o	12/7	3/2	20 oo	2
JR Z,o	12/7	3/2	28 oo	2

Instruction	T(Z80)		Opcode	Size	Instruction	T(Z80)		Opcode	Size
LD (BC),A	7	2	02	1	LD L,(HL)	7	2	6E	1
LD (DE),A	7	2	12	1	LD L,(IX+o)	19	5	DD 6E oo	3
LD (HL),n	10	3	36 nn	2	LD L,(IY+o)	19	5	FD 6E oo	3
LD (HL),r	7	2	70+r	1	LD L,n	7	2	2E nn	2
LD (IX+o),n	19	5	DD 36 oo nn	4	LD L,r	4	1	68+r	1
LD (IX+o),r	19	5	DD 70+r oo	3	LD R,A	9	2	ED 4F	2
LD (IY+o),n	19	5	FD 36 oo nn	4	LD SP,(nn)	20	6	ED 7B nn nn	4
LD (IY+o),r	19	5	FD 70+r oo	3	LD SP,HL	6	1	F9	1
LD (nn),A	13	4	32 nn nn	3	LD SP,IX	10	2	DD F9	2
LD (nn),BC	20	6	ED 43 nn nn	4	LD SP,IY	10	2	FD F9	2
LD (nn),DE	20	6	ED 53 nn nn	4	LD SP,nn	10	3	31 nn nn	3
LD (nn),HL	16	5	22 nn nn	3	LDD	16	4	ED A8	2
LD (nn),IX	20	6	DD 22 nn nn	4	LDDR	21/16	4	ED B8	2
LD (nn),IY	20	6	FD 22 nn nn	4	LDI	16	4	ED A0	2
LD (nn),SP	20	6	ED 73 nn nn	4	LDIR	21/16	4	ED B0	2
LD A,(BC)	7	2	0A	1					
LD A,(DE)	7	2	1A	1	NEG	8	2	ED 44	2
LD A,(HL)	7	2	7E	1	NOP	4	1	00	1
LD A,(IX+o)	19	5	DD 7E oo	3					
LD A,(IY+o)	19	1	FD 7E oo	3	OR (HL)	7	2	B6	1
LD A,(nn)	13	4	3A nn nn	3	OR (IX+o)	19	5	DD B6 oo	3
LD A,n	7	2	3E nn	2	OR (IY+o)	19	5	FD B6 oo	3
LD A,r	4	1	78+r	1	OR n	7	2	F6 nn	2
LD A,IXp	8	2	DD 78+p	2	OR r	4	1	B0+r	1
LD A,IYq	8	2	FD 78+q	2	OR IXp	8	2	DD B0+p	2
LD A,I	9	2	ED 57	2	OR IYq	8	2	FD B0+q	2
LD A,R	9	2	ED 5F	2	OTDR	21/16	4/3	ED BB	2
LD B,(HL)	7	2	46	1	OTIR	21/16	4/3	ED B3	2
LD B,(IX+o)	19	5	DD 46 oo	3	OUT (C),A	12	3	ED 79	2
LD B,(IY+o)	19	5	FD 46 oo	3	OUT (C),B	12	3	ED 41	2
LD B,n	7	2	06 nn	2	OUT (C),C	12	3	ED 49	2
LD B,r	4	1	40+r	1	OUT (C),D	12	3	ED 51	2
LD B,IXp	8	2	DD 40+p	2	OUT (C),E	12	3	ED 59	2
LD B,IYq	8	2	FD 40+q	2	OUT (C),H	12	3	ED 61	2
LD BC,(nn)	20	6	ED 4B nn nn	4	OUT (C),L	12	3	ED 69	2
LD BC,nn	10	3	01 nn nn	3	OUT (n),A	11	3	D3 nn	2
LD C,(HL)	7	2	4E	1	OUTD	16	4	ED AB	2
LD C,(IX+o)	19	5	DD 4E oo	3	OUTI	16	4	ED A3	2
LD C,(IY+o)	19	5	FD 4E oo	3					
LD C,n	7	2	0E nn	2	POP AF	10	3	F1	1
LD C,r	4	1	48+r	1	POP BC	10	3	C1	1
LD C,IXp	8	2	DD 48+p	2	POP DE	10	3	D1	1
LD C,IYq	8	2	FD 48+q	2	POP HL	10	3	E1	1
LD D,(HL)	7	2	56	1	POP IX	14	4	DD E1	2
LD D,(IX+o)	19	5	DD 56 oo	3	POP IY	14	4	FD E1	2
LD D,(IY+o)	19	5	FD 56 oo	3	PUSH AF	11	4	F5	1
LD D,n	7	2	16 nn	2	PUSH BC	11	4	C5	1
LD D,r	4	1	50+r	1	PUSH DE	11	4	D5	1
LD D,IXp	8	2	DD 50+p	2	PUSH HL	11	4	E5	1
LD D,IYq	8	2	FD 50+q	2	PUSH IX	15	5	DD E5	2
LD DE,(nn)	20	6	ED 5B nn nn	4	PUSH IY	15	5	FD E5	2
LD DE,nn	10	3	11 nn nn	3					
LD E,(HL)	7	2	5E	1	RES b,(HL)	15	5	CB 86+8*b	2
LD E,(IX+o)	19	5	DD 5E oo	3	RES b,(IX+o)	23	7	DD CB oo 86+8*b	4
LD E,(IY+o)	19	5	FD 5E oo	3	RES b,(IY+o)	23	7	FD CB oo 86+8*b	4
LD E,n	7	2	1E nn	2	RES b,r	8	2	CB 80+8*b+r	2
LD E,r	4	1	58+r	1	RET	10	3	C9	1
LD E,IXp	8	2	DD 58+p	2	RET C	11/5	3/1	D8	1
LD E,IYq	8	2	FD 58+q	2	RET M	11/5	3/1	F8	1
LD H,(HL)	7	2	66	1	RET NC	11/5	3/1	D0	1
LD H,(IX+o)	19	5	DD 66 oo	3	RET NZ	11/5	3/1	C0	1
LD H,(IY+o)	19	5	FD 66 oo	3	RET P	11/5	3/1	F0	1
LD H,n	7	2	26 nn	2	RET PE	11/5	3/1	E8	1
LD H,r	4	1	60+r	1	RET PO	11/5	3/1	E0	1
LD HL,(nn)	16	5	2A nn nn	5	RET Z	11/5	3/1	C8	1
LD HL,nn	10	3	21 nn nn	3	RETI	14	5	ED 4D	2
LD I,A	9	2	ED 47	2	RETN	14	5	ED 45	2
LD IX,(nn)	20	6	DD 2A nn nn	4	RL (HL)	15	5	CB 16	2
LD IX,nn	14	4	DD 21 nn nn	4	RL (IX+o)	23	7	DD CB oo 16	4
LD IXh,n	11	3	DD 26 nn	2	RL (IY+o)	23	7	FD CB oo 16	4
LD IXh,p	8	2	DD 60+p	2	RL r	8	2	CB 10+r	2
LD IXl,n	11	3	DD 2E nn	2	RLA	4	1	17	1
LD IXl,p	8	2	DD 68+p	2	RLC (HL)	15	5	CB 06	2
LD IY,(nn)	20	6	FD 2A nn nn	4	RLC (IX+o)	23	7	DD CB oo 06	4
LD IY,nn	14	4	FD 21 nn nn	4	RLC (IY+o)	23	7	FD CB oo 06	4
LD IYh,n	11	3	FD 26 nn	2	RLC r	8	2	CB 00+r	2
LD IYh,q	8	2	FD 60+q	2	RLCA	4	1	07	1
LD IYl,n	11	3	FD 2E nn	2	RLD	18	5	ED 6F	2
LD IYl,q	8	2	FD 68+q	2	RR (HL)	15	5	CB 1E	2

Instruction	T(Z80)		Opcode	Size
RR (IX+o)	23	7	DD CB oo 1E	4
RR (IY+o)	23	7	FD CB oo 1E	4
RR r	8	2	CB 18+r	2
RRA	4	1	1F	1
RRC (HL)	15	5	CB 0E	2
RRC (IX+o)	23	7	DD CB oo 0E	4
RRC (IY+o)	23	7	FD CB oo 0E	4
RRC r	8	2	CB 08+r	2
RRCA	4	1	0F	1
RRD	18	5	ED 67	2
RST 0	11	4	C7	1
RST 8H	11	4	CF	1
RST 10H	11	4	D7	1
RST 18H	11	4	DF	1
RST 20H	11	4	E7	1
RST 28H	11	4	EF	1
RST 30H	11	4	F7	1
RST 38H	11	4	FF	1
SBC A,(HL)	7	2	9E	1
SBC A,(IX+o)	19	5	DD 9E oo	3
SBC A,(IY+o)	19	5	FD 9E oo	3
SBC A,n	7	2	DE nn	2
SBC A,r	4	1	98+r	1
SBC A,IXp	8	2	DD 98+p	2
SBC A,IYq	8	2	FD 98+q	2
SBC HL,BC	15	2	ED 42	2
SBC HL,DE	15	2	ED 52	2
SBC HL,HL	15	2	ED 62	2
SBC HL,SP	15	2	ED 72	2
SCF	4	1	37	1
SET b,(HL)	15	5	CB C6+8*b	2
SET b,(IX+o)	23	7	DD CB oo C6+8*b	4
SET b,(IY+o)	23	7	FD CB oo C6+8*b	4
SET b,r	8	2	CB C0+8*b+r	2
SLA (HL)	15	5	CB 26	2
SLA (IX+o)	23	7	DD CB oo 26	4
SLA (IY+o)	23	7	FD CB oo 26	4
SLA r	8	2	CB 20+r	2
SRA (HL)	15	5	CB 2E	2
SRA (IX+o)	23	7	DD CB oo 2E	4
SRA (IY+o)	23	7	FD CB oo 2E	4
SRA r	8	2	CB 28+r	2
SRL (HL)	15	5	CB 3E	2
SRL (IX+o)	23	7	DD CB oo 3E	4
SRL (IY+o)	23	7	FD CB oo 3E	4
SRL r	8	2	CB 38+r	2
SUB (HL)	7	2	96	1
SUB (IX+o)	19	5	DD 96 oo	3
SUB (IY+o)	19	5	FD 96 oo	3
SUB n	7	2	D6 nn	2
SUB r	4	1	90+r	1
SUB IXp	8	2	DD 90+p	2
SUB IYq	8	2	FD 90+q	2
XOR (HL)	7	2	AE	1
XOR (IX+o)	19	5	DD AE oo	3
XOR (IY+o)	19	5	FD AE oo	3
XOR n	7	2	EE nn	2
XOR r	4	1	A8+r	1
XOR IXp	8	2	DD A8+p	2
XOR IYq	8	2	FD A8+q	2

In this overview, the following variables were used:

b 3-bit value
n 8-bit value
nn 16-bit value
o 8-bit offset (2-complement)
r Register. This can be A, B, C, D, E, H, L or (HL). Add the following value to the last byte of the opcode:

Register	Register bits value
A	7
B	0
C	1
D	2
E	3
H	4
L	5
(HL)	6

p, Ixp Denotes the high or low part of the IX register: IXh or IXl. Add the following value to the last byte of the opcode:

Register	Register bits value
A	7
B	0
C	1
D	2
E	3
IXh	4
IXl	5

q, Iyq Denotes the high or low part of the IY register: IYh or IYl. Add the following value to the last byte of the opcode:

Register	Register bits value
A	7
B	0
C	1
D	2
E	3
IYh	4
IYl	5