LDA — LOAD THE ACCUMULATOR — 6502
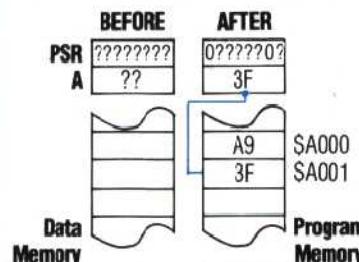### Immediate.—A9 (2 bytes)

The contents of the byte following the op-code are loaded into the accumulator.

EFFECT ON PSR

S V   B D I Z C
MSB [X| | | | | |X] LSB

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
A000	A9 3F	LDA #$3F

	BEFORE	AFTER
PSR	????????	0?????0?
A	??	3F

| | A9 | $A000 |
| | 3F | $A001 |

Data Memory / Program Memory

LD A, — LOAD THE ACCUMULATOR — Z80
Immediate –3E (2 bytes)

The contents of the byte following the op-code are loaded into the accumulator.

EFFECT ON PSR

S Z H V N C
MSB [| | | | | | |] LSB
NO EFFECT

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
A000	3E 9B	LD A,$9B

	BEFORE	AFTER
PSR	????????	????????
A	??	9B

| | 3E | $A000 |
| | 9B | $A001 |

Data Memory / Program Memory

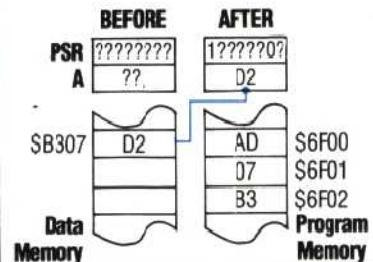## LDA — LOAD THE ACCUMULATOR — 6502
From memory—AD (3 bytes)

The contents of the memory location whose address follows the op-code are loaded into the accumulator.
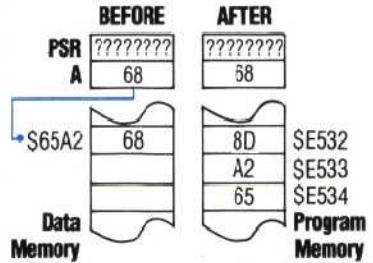
EFFECT ON PSR

S V   B D I Z C
MSB [X| | | | | |X] LSB

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
6F00	AD 07 B3	LDA $B307

	BEFORE	AFTER
PSR	????????	1?????0?
A	??	D2

| $B307 | D2 | |

	AD	$6F00
	07	$6F01
	B3	$6F02

Data Memory / Program Memory

LD A, — LOAD THE ACCUMULATOR — Z80
From memory –3A (3 bytes)

The contents of the memory location whose address follows the op-code are loaded into the accumulator.

EFFECT ON PSR

S Z H V N C
MSB [| | | | | | |] LSB
NO EFFECT

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
6F00	3A E9 F4	LD A,($F4E9)

	BEFORE	AFTER
PSR	????????	????????
A	??	8C

| $F4E9 | 8C | |

	3A	$6F00
	E9	$6F01
	F4	$6F02

Data Memory / Program Memory

STA — STORE THE ACCUMULATOR — 6502
To memory —8D (3 bytes)

The contents of the accumulator are loaded into the memory location whose address follows the op-code.

EFFECT ON PSR

S V   B D I Z C
MSB [| | | | | | |] LSB
NO EFFECT

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
E532	8D A2 65	STA $65A2

	BEFORE	AFTER
PSR	????????	????????
A	68	68

| $65A2 | 68 | |

	8D	$E532
	A2	$E533
	65	$E534

Data Memory / Program Memory

LD( ),A — LOAD THE ACCUMULATOR — Z80
To memory —32 (3 bytes)

The contents of the accumulator are loaded into the memory location whose address follows the op-code.

EFFECT ON PSR

S Z H V N C
MSB [| | | | | | |] LSB
NO EFFECT

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
E532	32 E9 F4	LD ($F4E9),A

	BEFORE	AFTER
PSR	????????	????????
A	4B	4B

| $F4E9 | 4B | |

	32	$E532
	E9	$E533
	F4	$E534

Data Memory / Program Memory

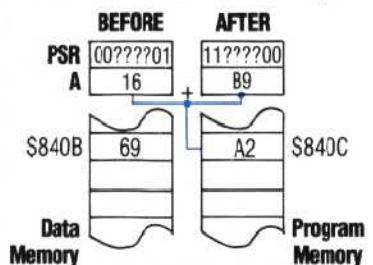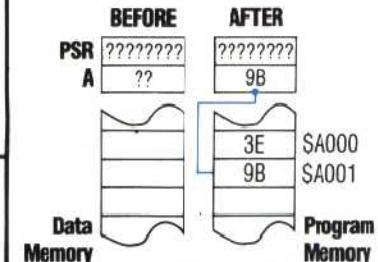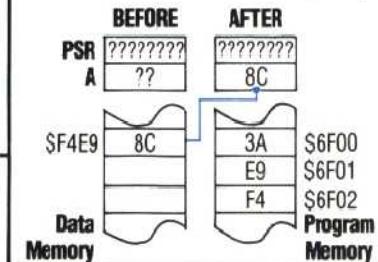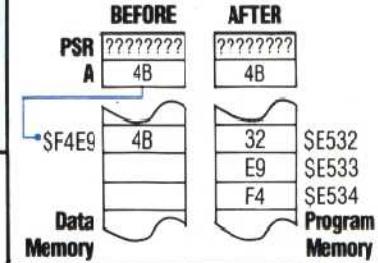## ADC — ADD WITH CARRY — 6502
Immediate —69 (2 bytes)

The carry flag plus the contents of the byte following the op-code are added to the contents of the accumulator.

EFFECT ON PSR

S V   B D I Z C
MSB [X|X| | | |X|X] LSB

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
840B	69 A2	ADC #$A2

	BEFORE	AFTER
PSR	00????01	11????00
A	16 +	B9

| $840B | 69 | A2 | $840C |

Data Memory / Program Memory

ADC A, — ADD WITH CARRY — Z80
Immediate —69 (2 bytes)

To the contents of the accumulator are added the carry flag plus the contents of the byte following the op-code.

EFFECT ON PSR

S Z H V N C
MSB [X|X| |X| |X| |X] LSB

Example:

LOCATION	MACHINE CODE	ASSEMBLY LANGUAGE
840B	CE B9	ADC A,$B9

	BEFORE	AFTER
PSR	00?0?001	10?0?1?0
A	24 +	DE

| | CE | $840B |
| | B9 | $840C |

Data Memory / Program Memory