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FLOWCHARTING TEMPLATE

(2-75) GX20-8020-1 U/M 010

The symbols on this envelope and the enclosed template conform to the International Organization for Standardization (ISO) International Standard 1028 — "Information Processing—Flowchart Symbols", and American National Standard, Flowchart Symbols and Their Usage in Information Processing, ANSI X3.5-1970. IBM usages beyond the above standards are three symbols: off-page connector, transmittal tape, and keying, which are identified IBM.

★ Composite Symbols (preceded by a star) are those drawn by adding to or combining shapes provided by cutoffs in the template.

On this envelope, symbols are in three groups: (1) basic symbols; (2) processing and sequencing symbols related to programming; (3) input/output, communication link, and processing symbols related to systems.

BASIC Symbols

PROCESS	Any processing function; defined operation(s) causing change in value, form, or location of information.	Additional descriptive clarification, comment. (Dotted line extends to symbols as appropriate.)	★ Comment, Annotation
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INPUT/OUTPUT	General i/o function; information available for processing (input), or recording of processed information (output).	○ CONNECTOR: Exit to, or entry from, another part of chart. Special OFFPAGE CONNECTOR for entry to or exit from a page. IBM	
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ARROWHEADS and Flowlines: In linking symbols, these show operations sequence and dataflow direction. Arrowheads required if path on any linkage is not left-to-right or top-to-bottom.

Flowlines can cross, meaning they have no logical interrelation.

Two incoming flowlines can join an outgoing line at junction point.

Three incoming flowlines can join an outgoing line at junction point. If four flowlines are colinear in pairs, one pair requires opposing arrowheads.

Symbols related to PROGRAMMING

DECISION	A decision or switching-type operation that determines which of a number of alternative paths followed.	Instruction modification to change program—set a switch, modify an index register, initialize a routine.	PREPARATION
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★ Predefined Process	One or more named operations or program steps specified in a subroutine or another set of flowcharts.	A terminal point in a flowchart—start, stop, halt, delay, or interrupt; may show exit from a closed subroutine.	TERMINAL, INTERRUPT
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Parallel Mode:

Beginning or end of two or more simultaneous operations (note examples of arrowhead detail).

BASIC Symbols (shown at top) also are used in program flowcharting and in systems flowcharting (see other side of envelope).

Symbols related to SYSTEMS

Input/output function in card medium (all varieties):



A collection of punched cards.



A collection of related punched-card records.

Other specific media:



TRANSMITTAL TAPE

Proof- or adding machine tape, or other batch-control info.



Input/output using any kind of online storage—magnetic tape, drum, disk.

An operation using a key-driven device—such as punching, verifying, typing.



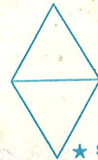
Other specific media for input/output functions:



Combining two or more sets of items into one set.



Merging with extracting; forming two or more sets of items from two or more other sets.



Arranging a set of items into sequence.



Storing offline, regardless of recorded medium.



Removal of one or more specific sets of items from a set.



Information display by online indicators, video devices, console printers, plotters, etc.

Information input by online keyboards, switch settings, pushbuttons.



Any offline process (at "human speed") without mechanical aid.

Offline performance on equipment not under direct control of central processing unit.



COMMUNICATION LINK: Function of transmitting information by a telecommunication link. (Vertical, horizontal, or diagonal, with arrowheads for clarity; bidirectional flow shown by two opposing arrowheads.)

