

Symbols on this envelope — reflecting additions and changes — conform to the International Organization for Standardization (ISO) Recommendation R1028 Flowchart Symbols for Information Processing, and conform to American National Standard Flowchart Symbols and Their Usage in Information Processing, X3.5 — 1970. All ANSI (American National Standards Institute, Inc.) symbols are equivalent to the ISO symbols. IBM usages beyond ISO and ANSI are three symbols — offpage connector, transmittal tape, keying — identified IBM.

★ Composite Symbols (preceded by a star) are those drawn by adding to or combining shapes provided by cutouts 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).