

The flowchart illustrates the KASUMI algorithm's execution flow. It begins with a start node (KASUMI) and proceeds through a series of operations (NUM1 to NUM11a) and decision points (BAD_KEY, NUM10a, NUM10b). The flow is determined by the value of K and the output of the operations. The final output is either PRINT_DENIED/101 or PRINT_ALLOWED/111.

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graph TD
    KASUMI([KASUMI]) --> NUM1([NUM1/0XX])
    NUM1 -- "K<=>1#/01;COF=X" --> NUM2([NUM2/0XX])
    NUM2 -- "K<=>3#/01;COF=X" --> NUM3([NUM3/0XX])
    NUM3 -- "K<=>8#/01;COF=X" --> NUM4([NUM4/0XX])
    NUM4 -- "K<=>1#/01;COF=X" --> NUM5([NUM5/0XX])
    NUM5 -- "K<=>7#/01;COF=X" --> NUM6ab([NUM6ab/0XX])
    NUM6ab -- "K=3#/01;COF=X" --> NUM7a([NUM7a/0XX])
    NUM6ab -- "K=7#/01;COF=X" --> NUM7b([NUM7b/0XX])
    NUM7a -- "K=3#/01;COF=X" --> NUM8a([NUM8a/0XX])
    NUM7b -- "K=7#/01;COF=X" --> NUM8b([NUM8b/0XX])
    NUM8a -- "K=2#/01;COF=X" --> NUM9a([NUM9a/0XX])
    NUM8b -- "K=4#/01;COF=X" --> NUM9b([NUM9b/0XX])
    NUM9a -- "K=4#/01;COF=X" --> NUM10a([NUM10a/0XX])
    NUM9b -- "K=6#/01;COF=X" --> NUM10b([NUM10b/0XX])
    NUM10a -- "K=4#/01;COF=X" --> NUM11a([NUM11a/0XX])
    NUM10b -- "K=6#/01;COF=X" --> NUM11b([NUM11b/0XX])
    NUM11a -- "K=4#/01;COF=X" --> NUM11b
    NUM11b -- "K=6#/01;COF=X" --> NUM_END([NUM_END/0XX])
    NUM11a -- "K=4#/01;COF=X" --> BAD_KEY([BAD_KEY/0XX])
    BAD_KEY -- "K<=>4#/01;COF=X" --> BAD_KEY
    BAD_KEY -- "K=#/01;COF=X" --> PRINT_DENIED([PRINT_DENIED/101])
    PRINT_DENIED -- "K=X/10;COF=0" --> PRINT_DENIED
    PRINT_DENIED -- "K=X/10;COF=0" --> PRINT_ALLOWED([PRINT_ALLOWED/111])
    PRINT_ALLOWED -- "K=X/10;COF=0" --> PRINT_ALLOWED
    PRINT_ALLOWED -- "K=#/00;COF=X" --> FINISH([FINISH/XXX])
    FINISH -- "K<=>#/01;COF=X" --> NUM1
    FINISH -- "K<=>#/00;COF=X" --> FINISH
  
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