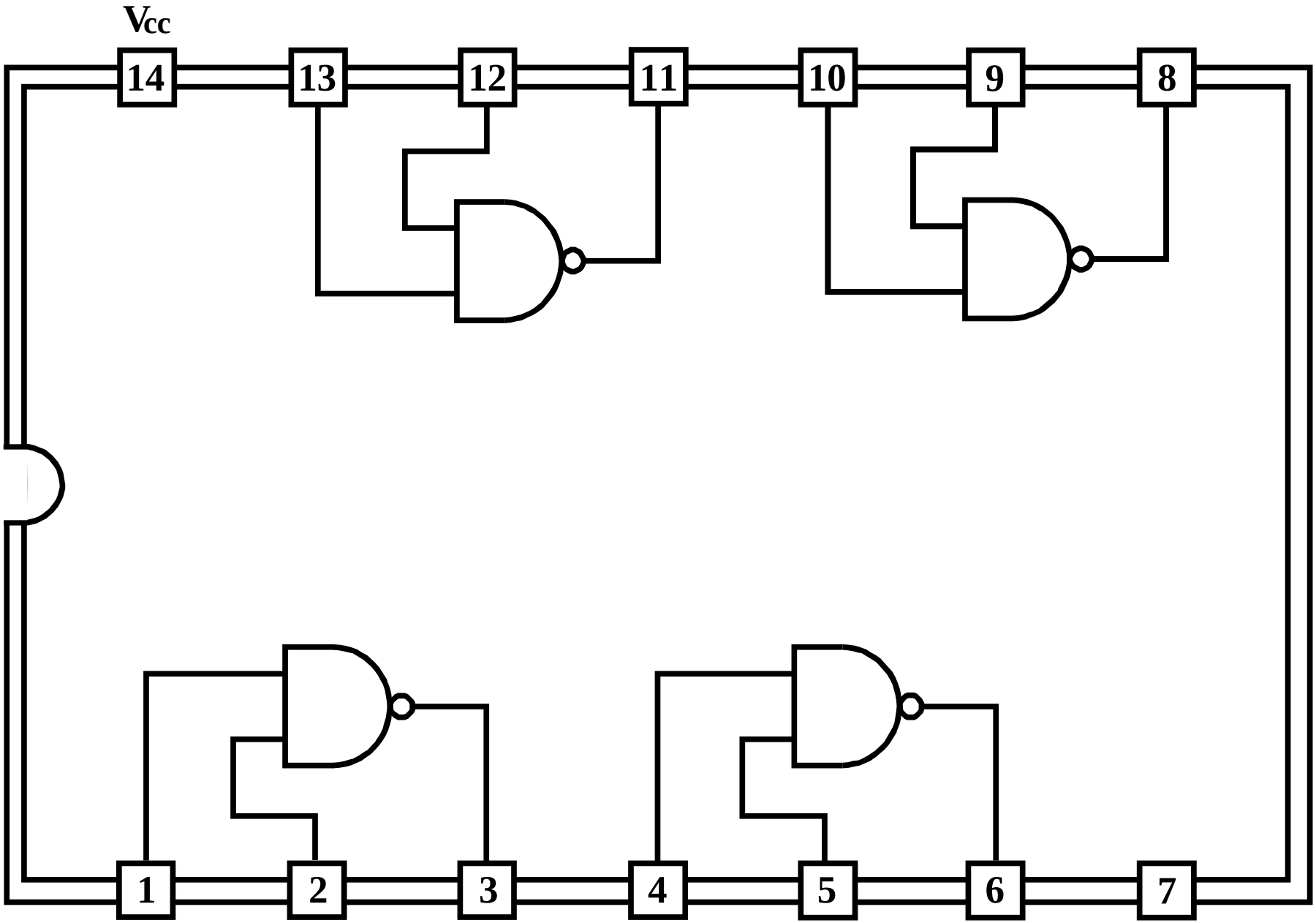
Layout of 7400-series Chips Commonly Used in

CDA 3101: Introduction to Computer Hardware and Organization

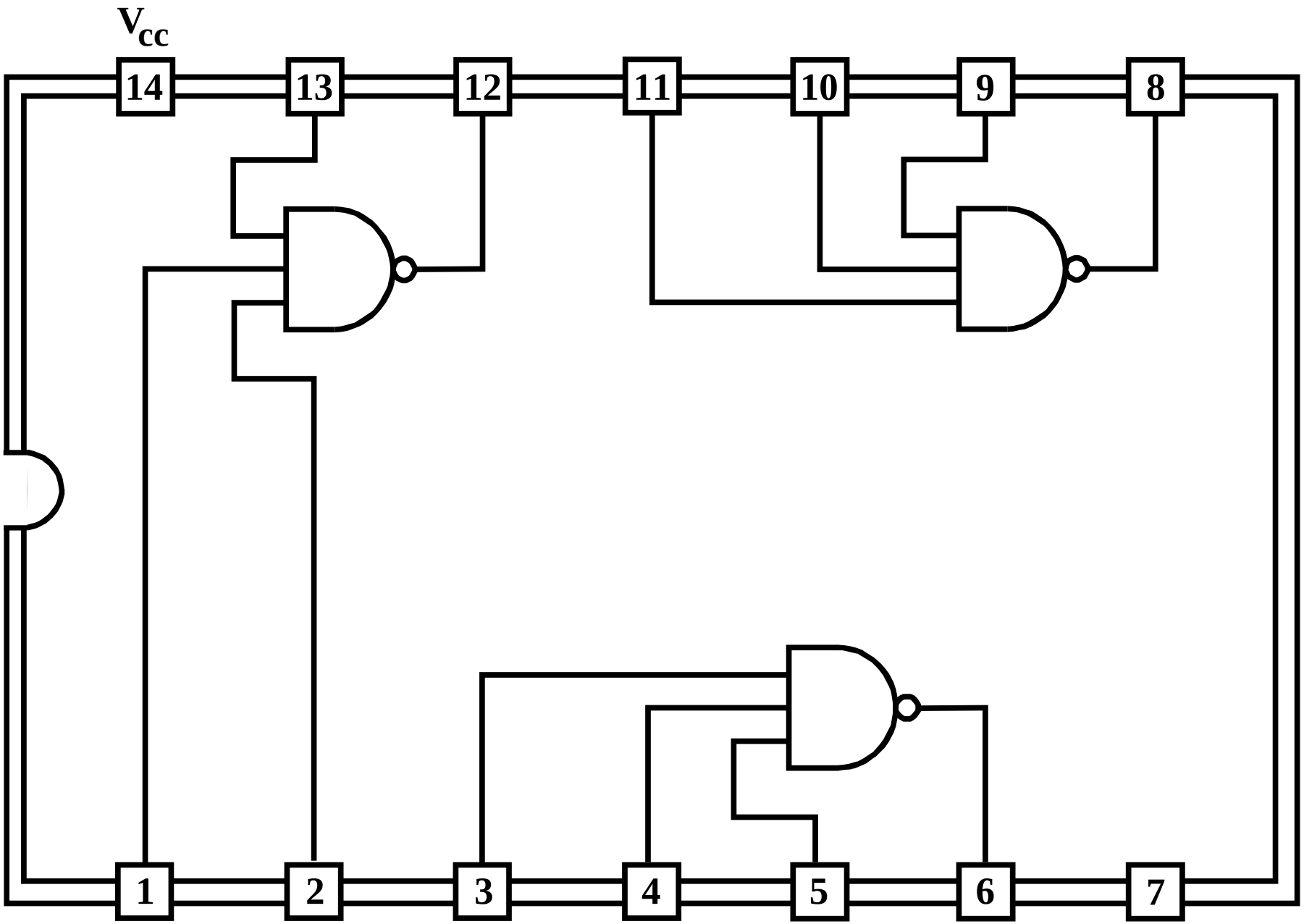
Charles N. Winton

Department of Computer and Information Sciences
University of North Florida

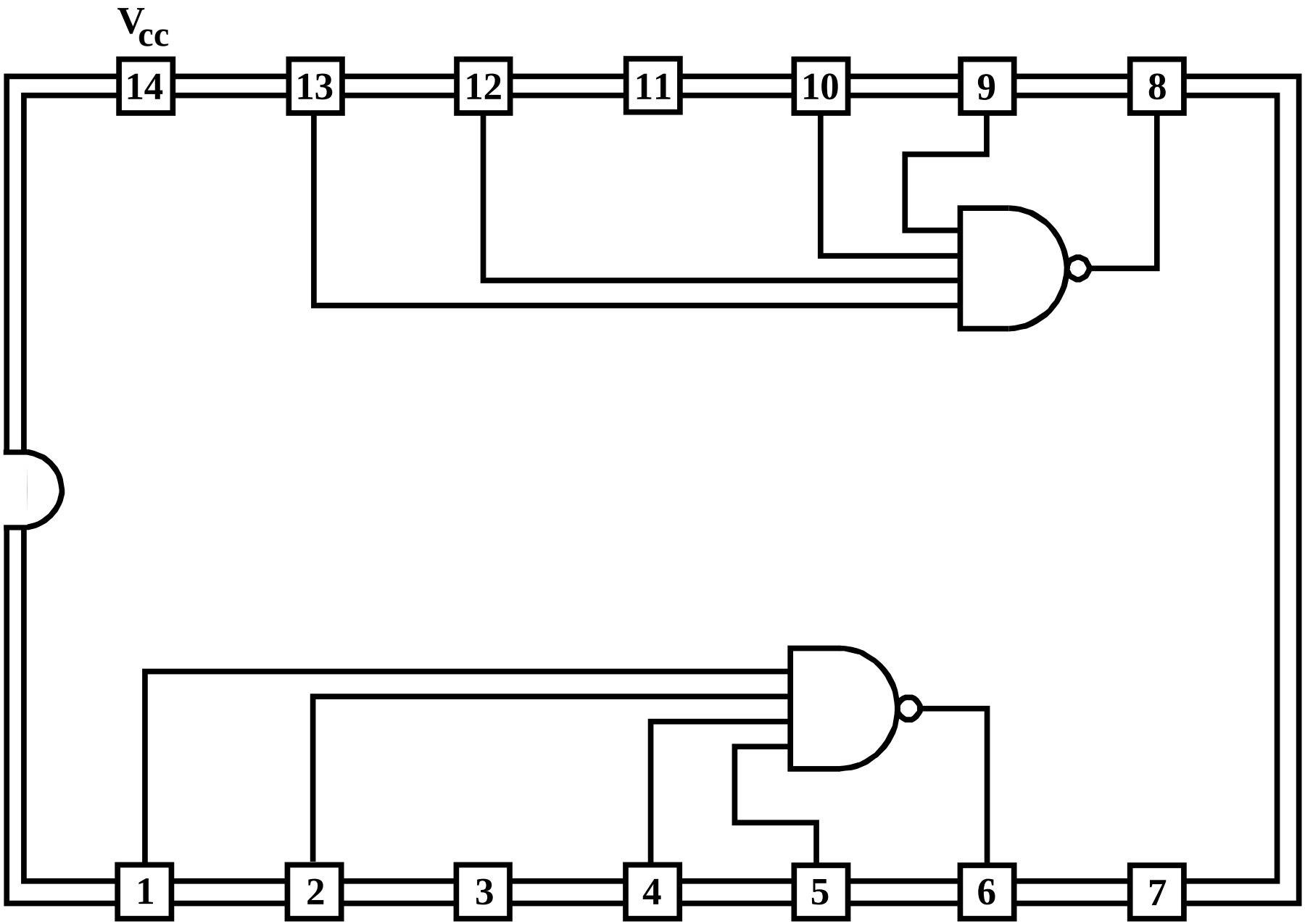
1999



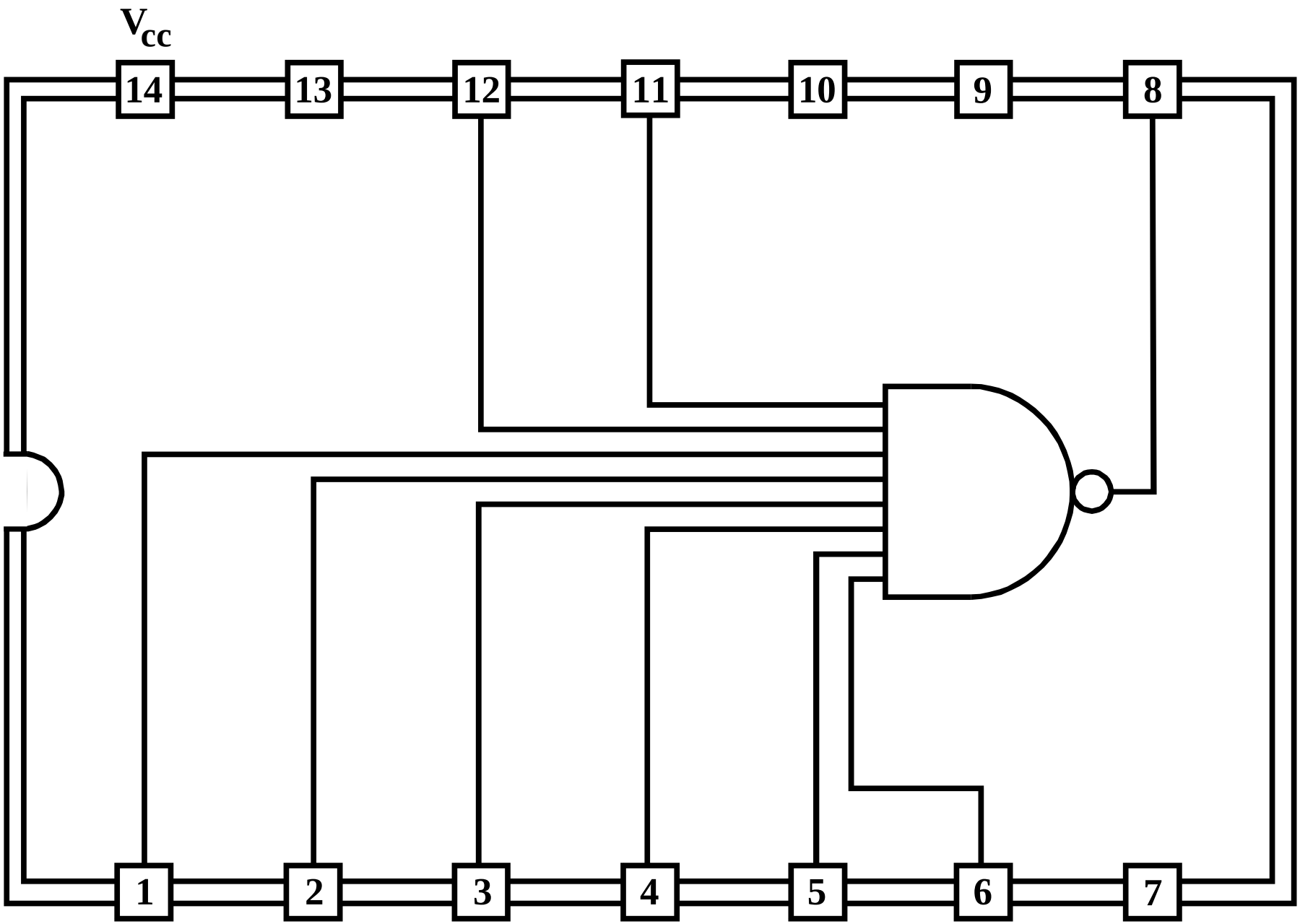
7400: QUAD 2-INPUT NAND



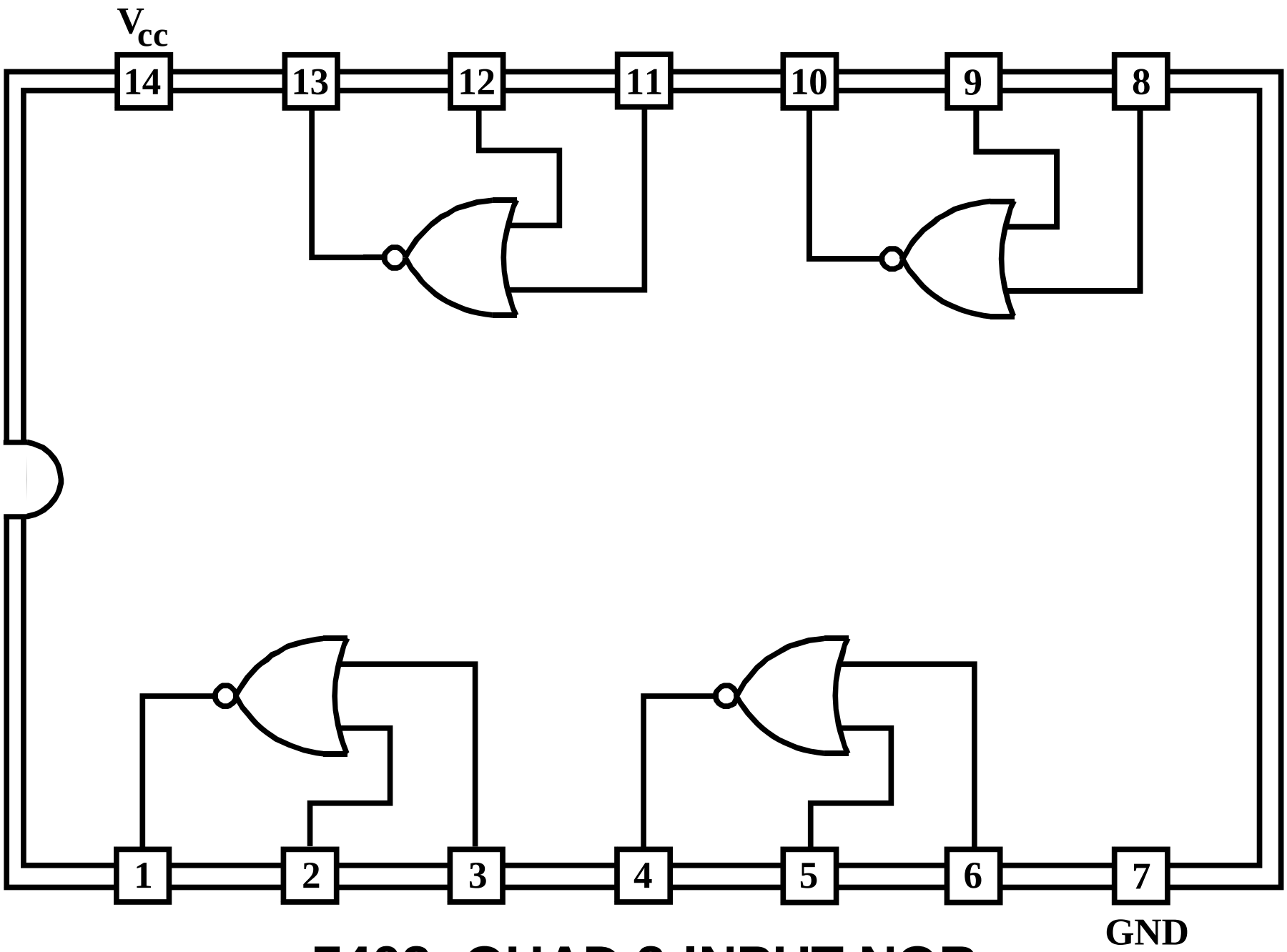
7410: TRIPLE 3-INPUT NAND



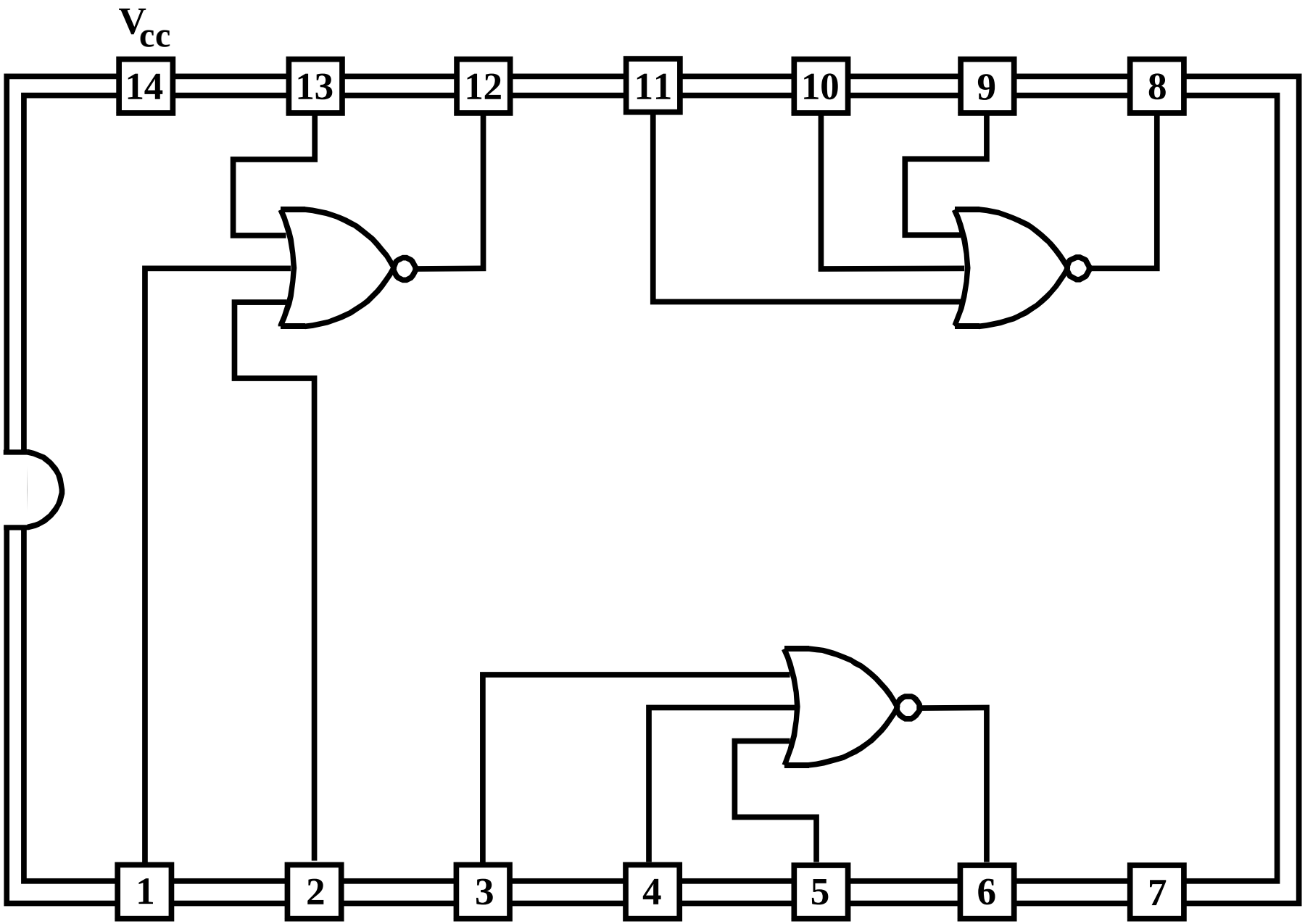
7420: DUAL 4-INPUT NAND



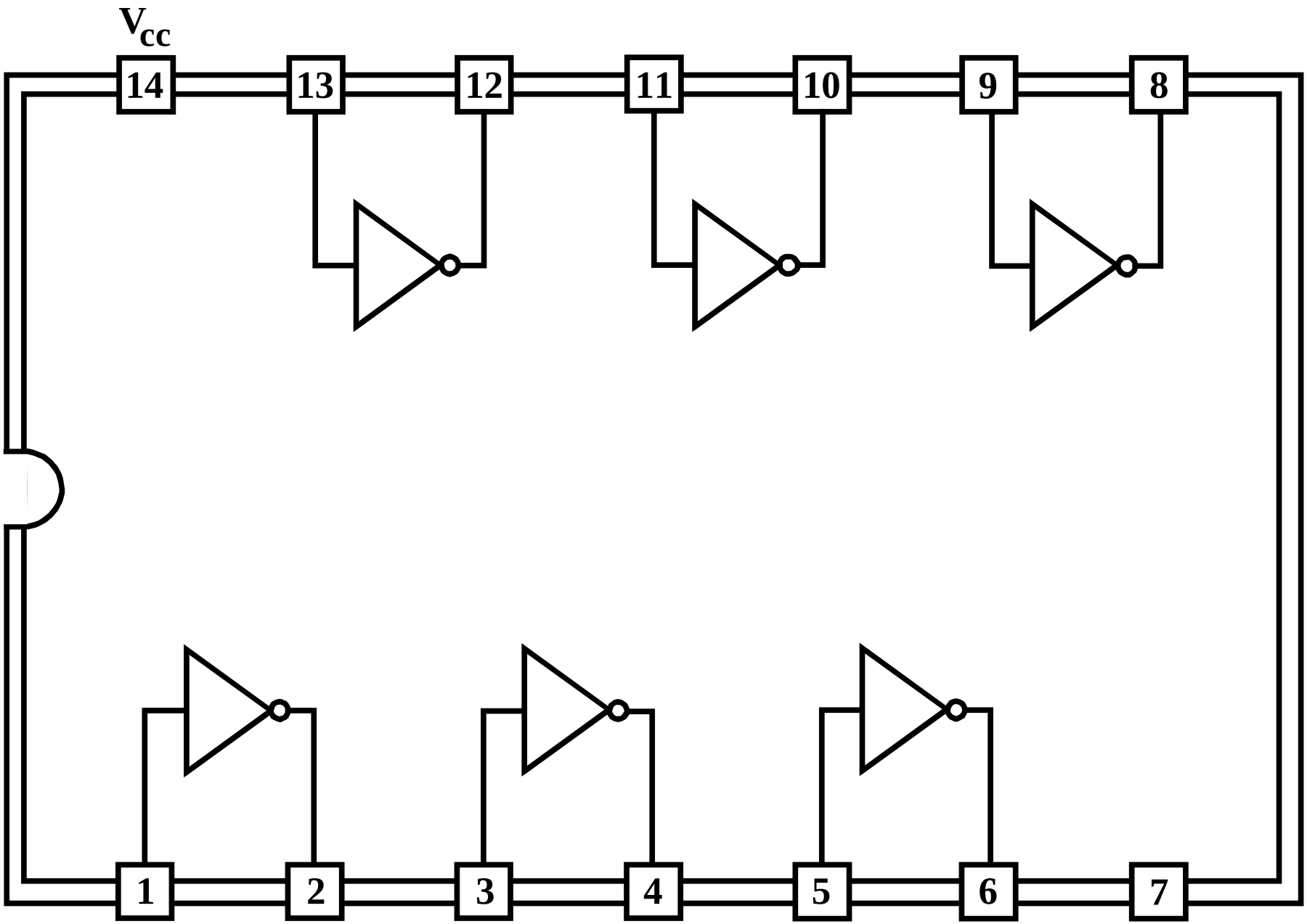
7430: 8-INPUT NAND



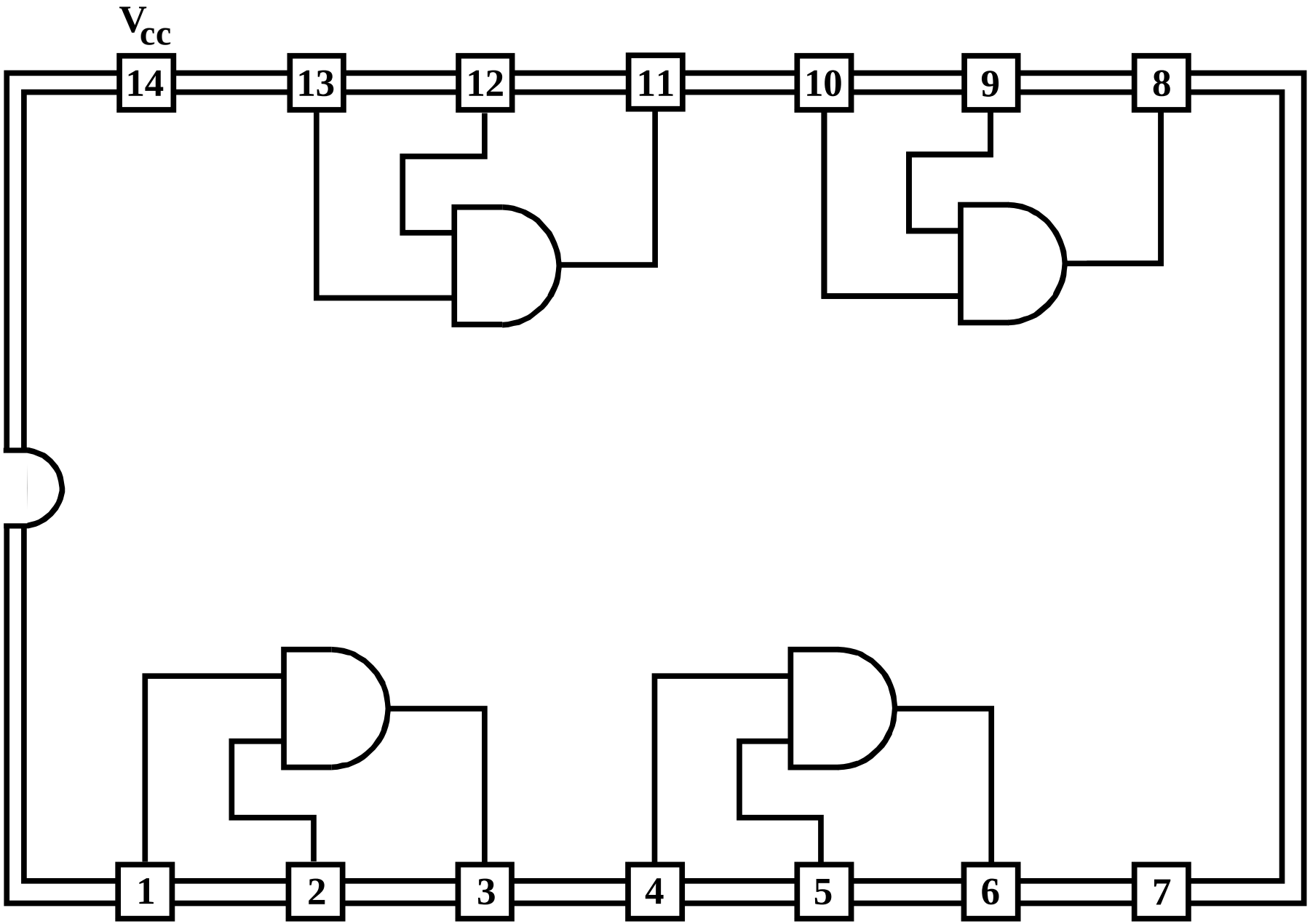
7402: QUAD 2-INPUT NOR



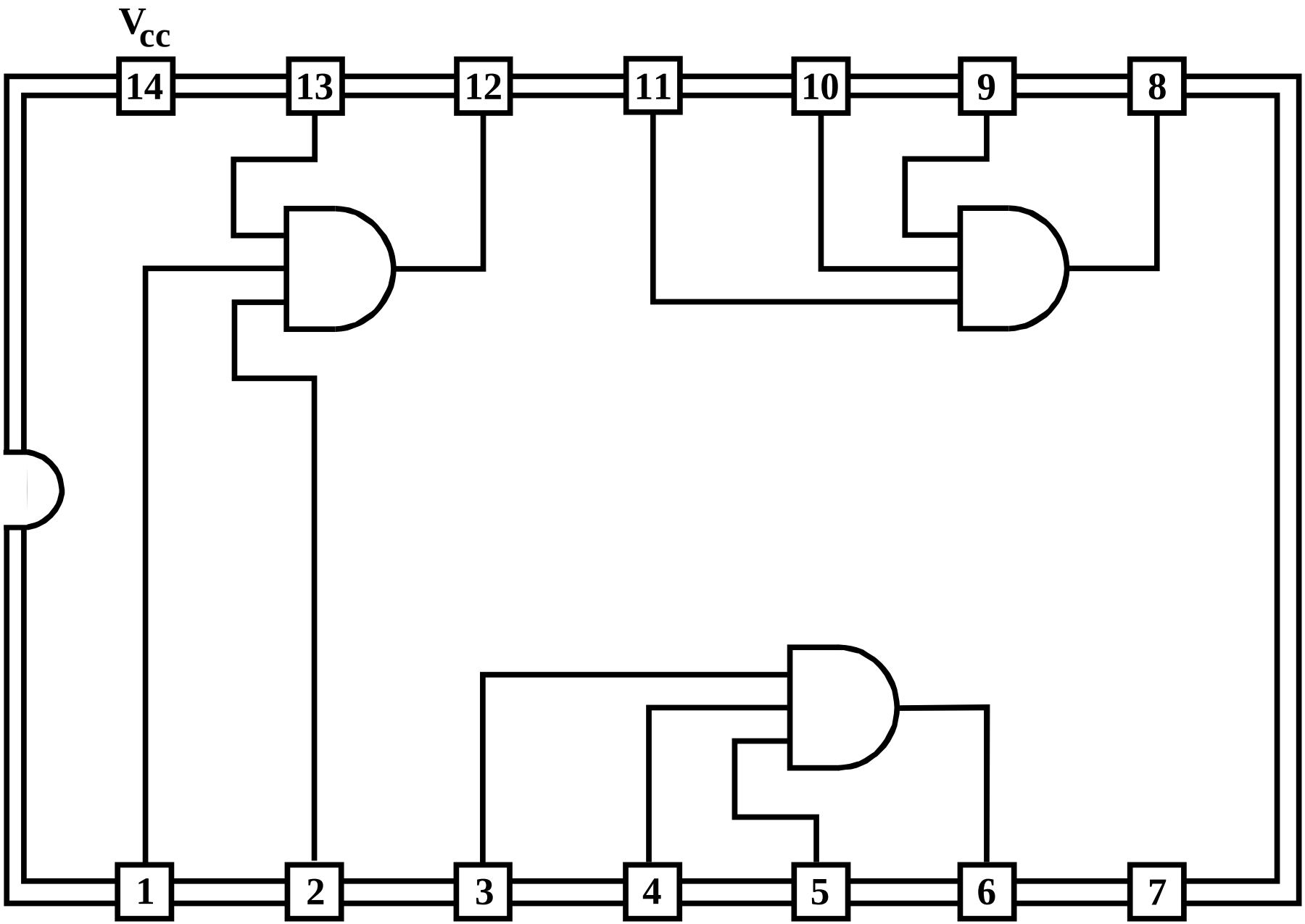
7427: TRIPLE 3-INPUT NOR



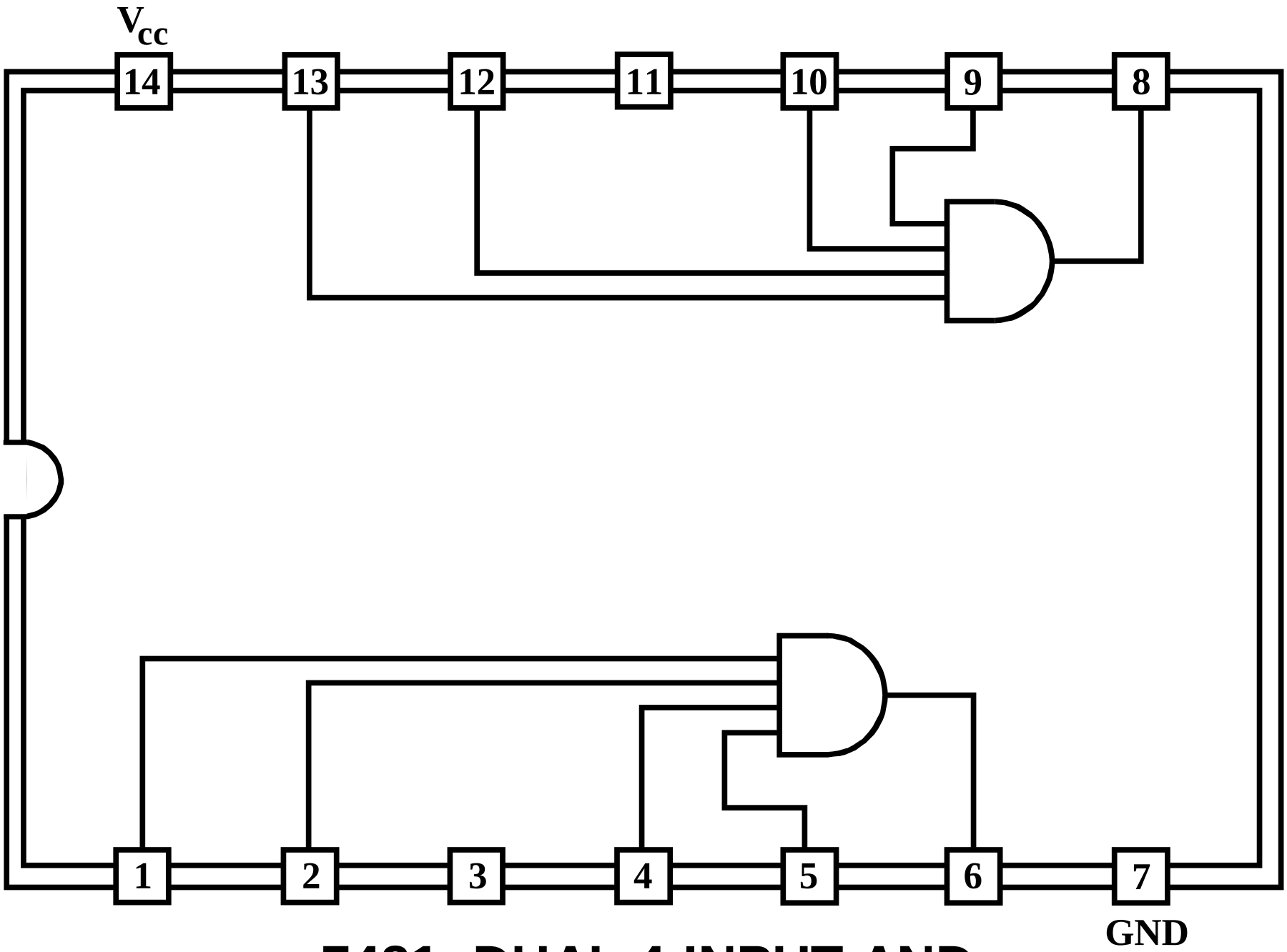
7404: INVERTERS



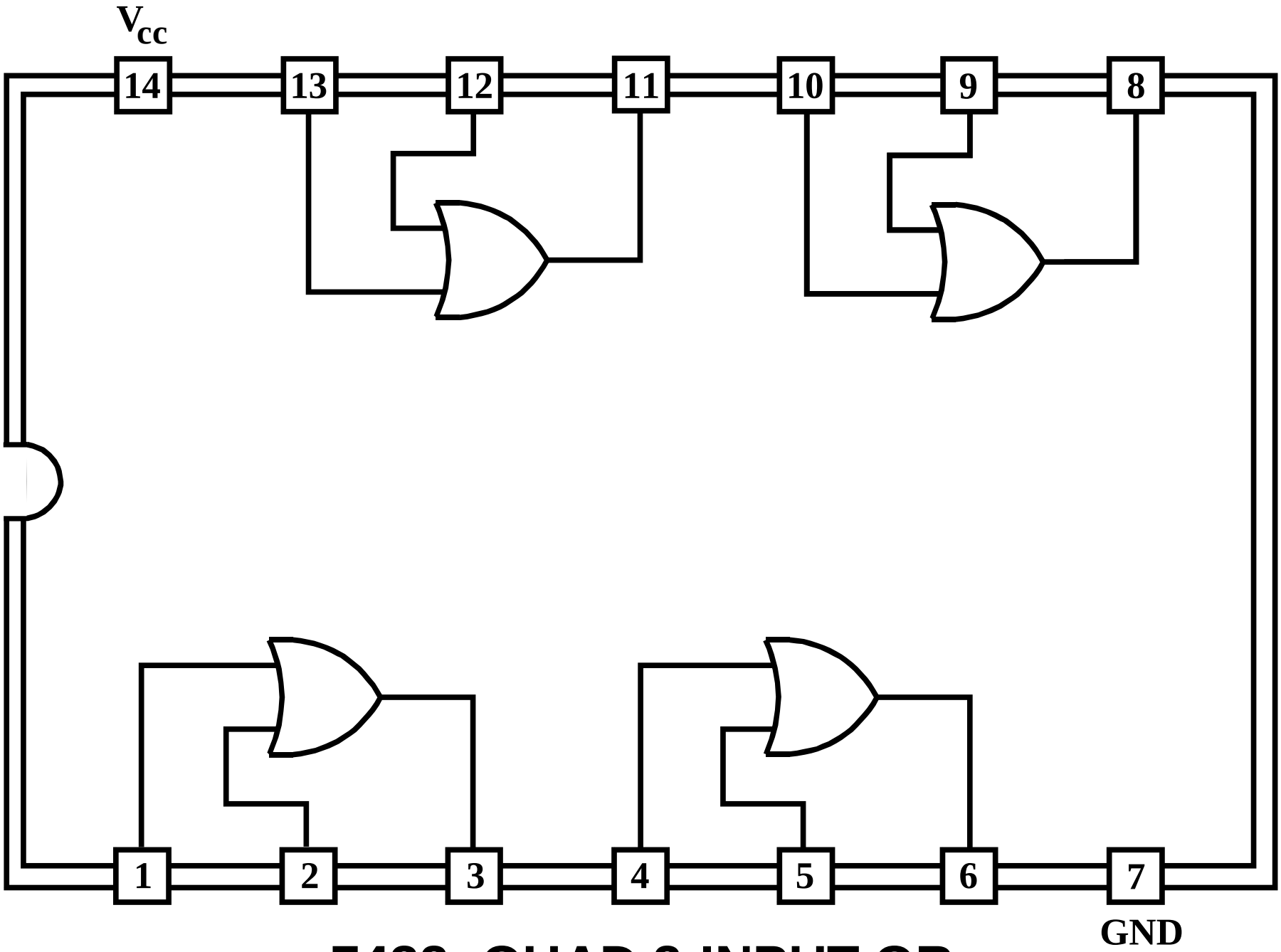
7408: QUAD 2-INPUT AND



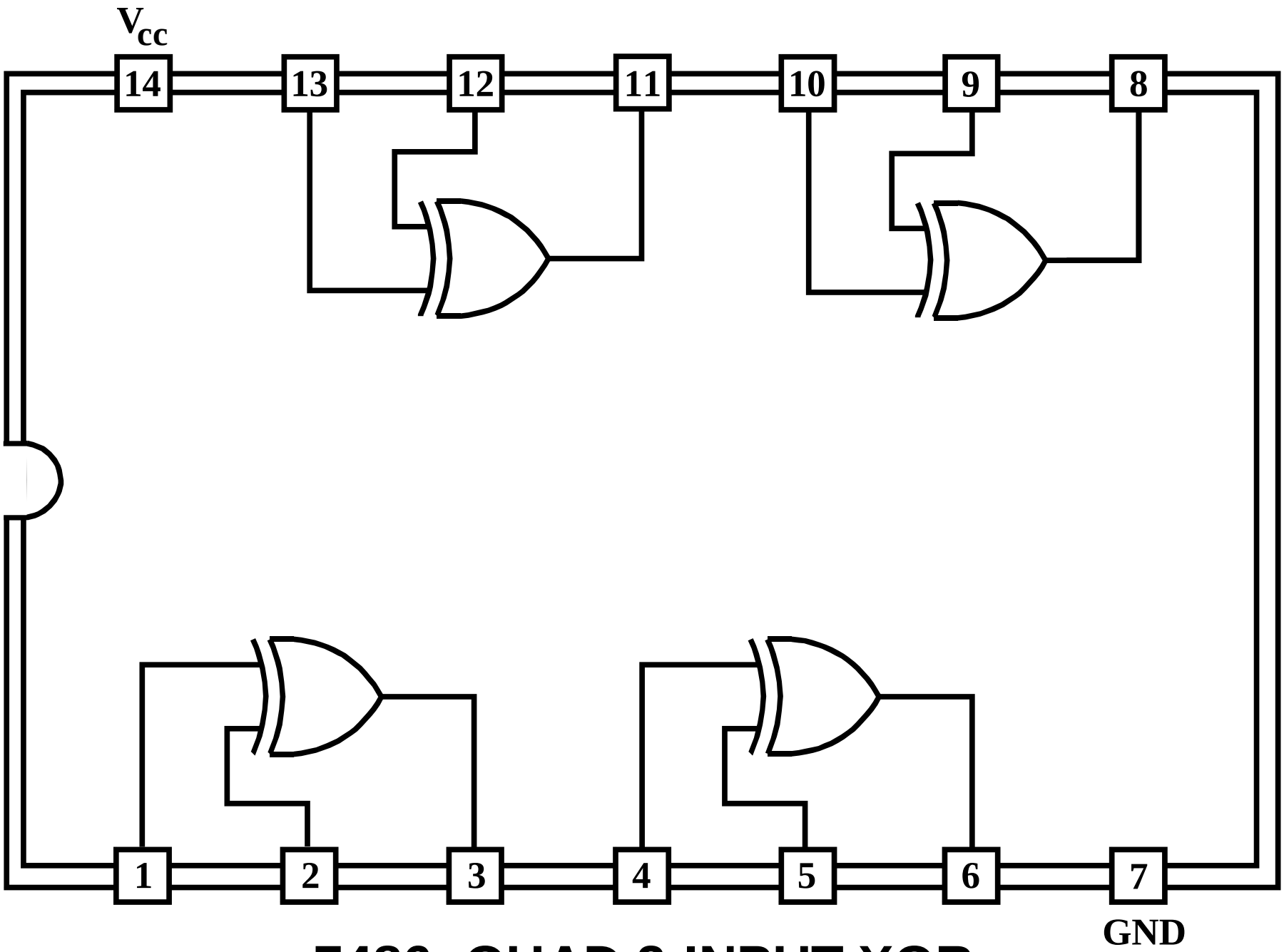
7411: TRIPLE 3-INPUT AND



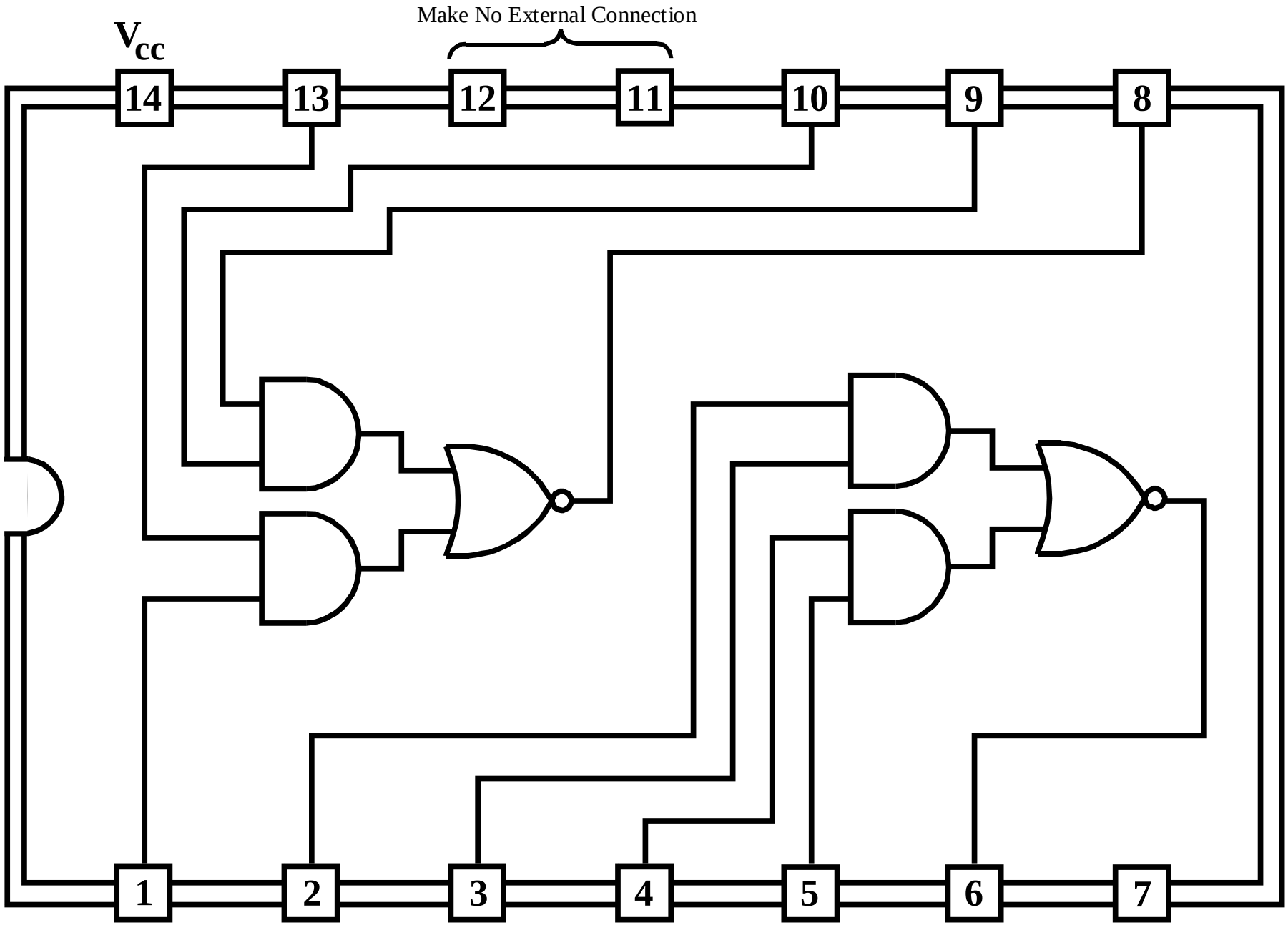
7421: DUAL 4-INPUT AND



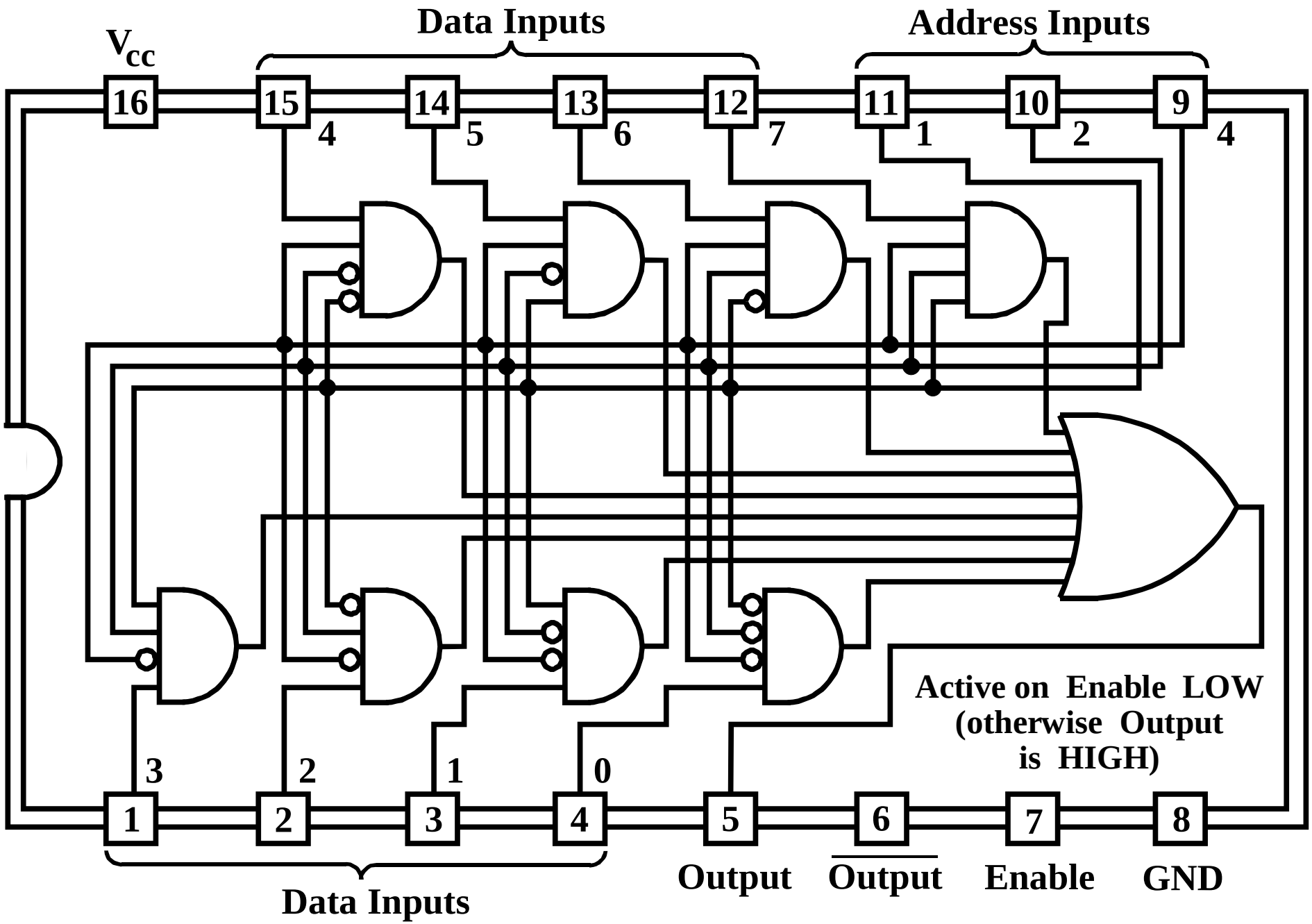
7432: QUAD 2-INPUT OR



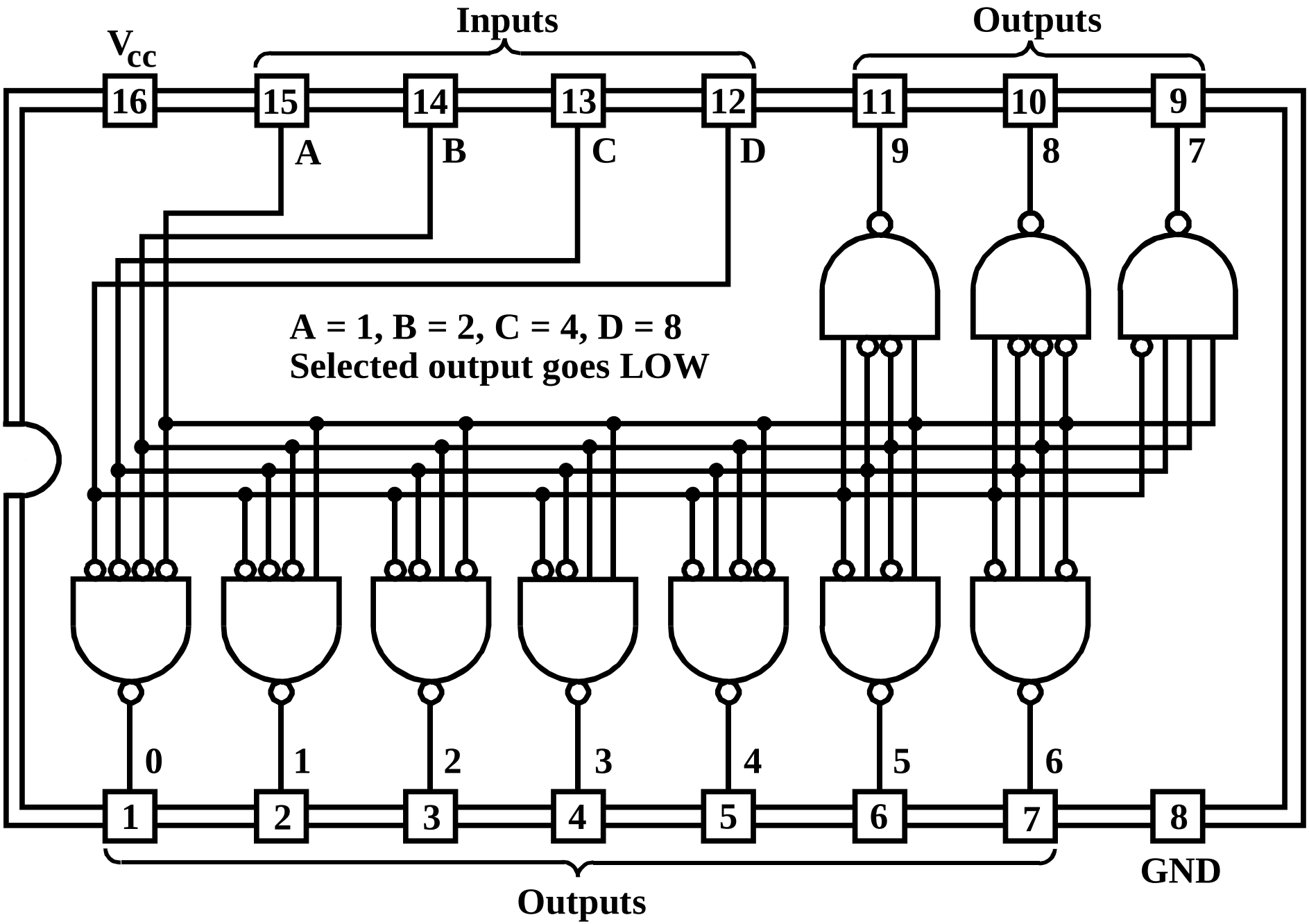
7486: QUAD 2-INPUT XOR



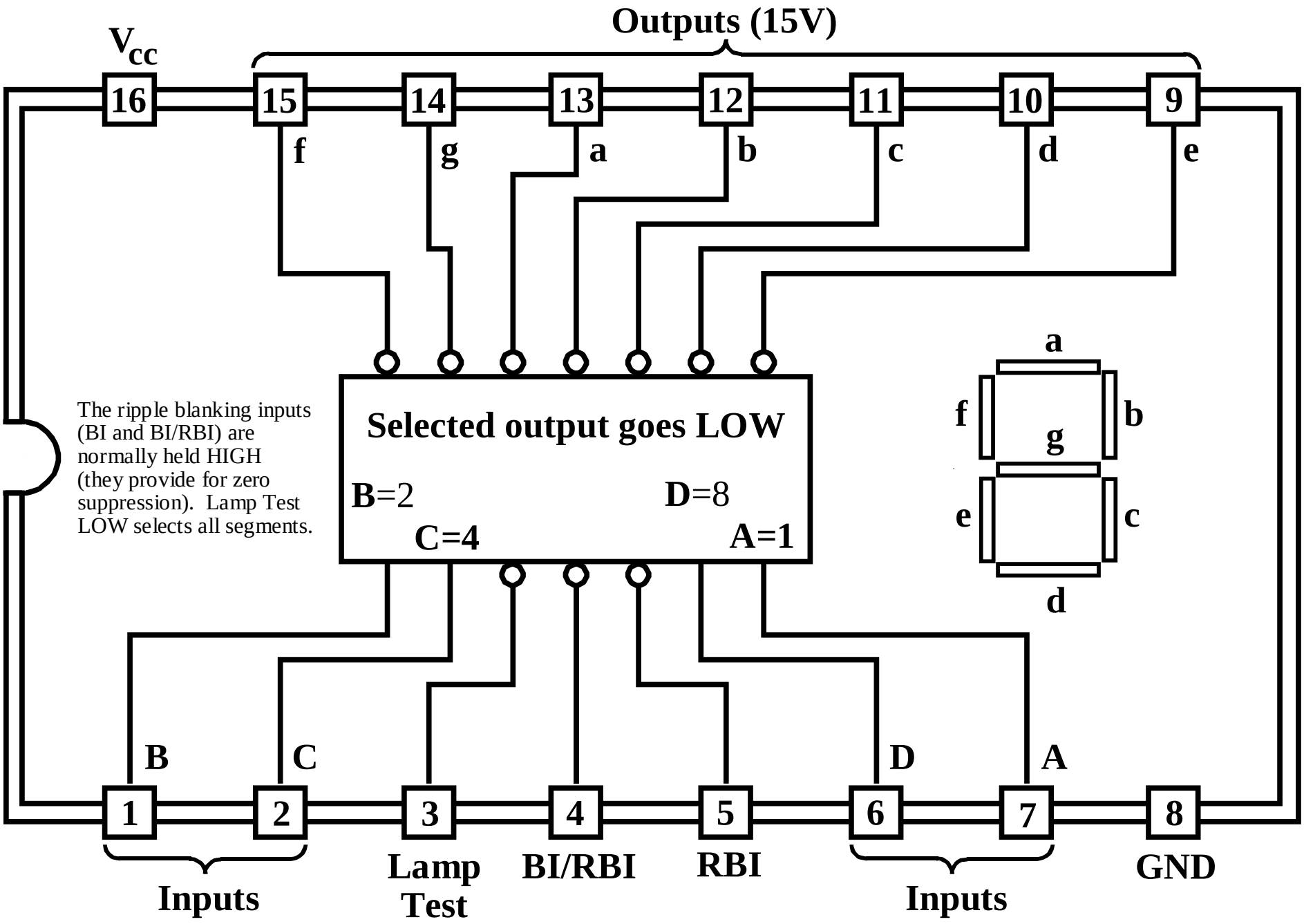
7451: DUAL 2-WIDE 2-INPUT AOI



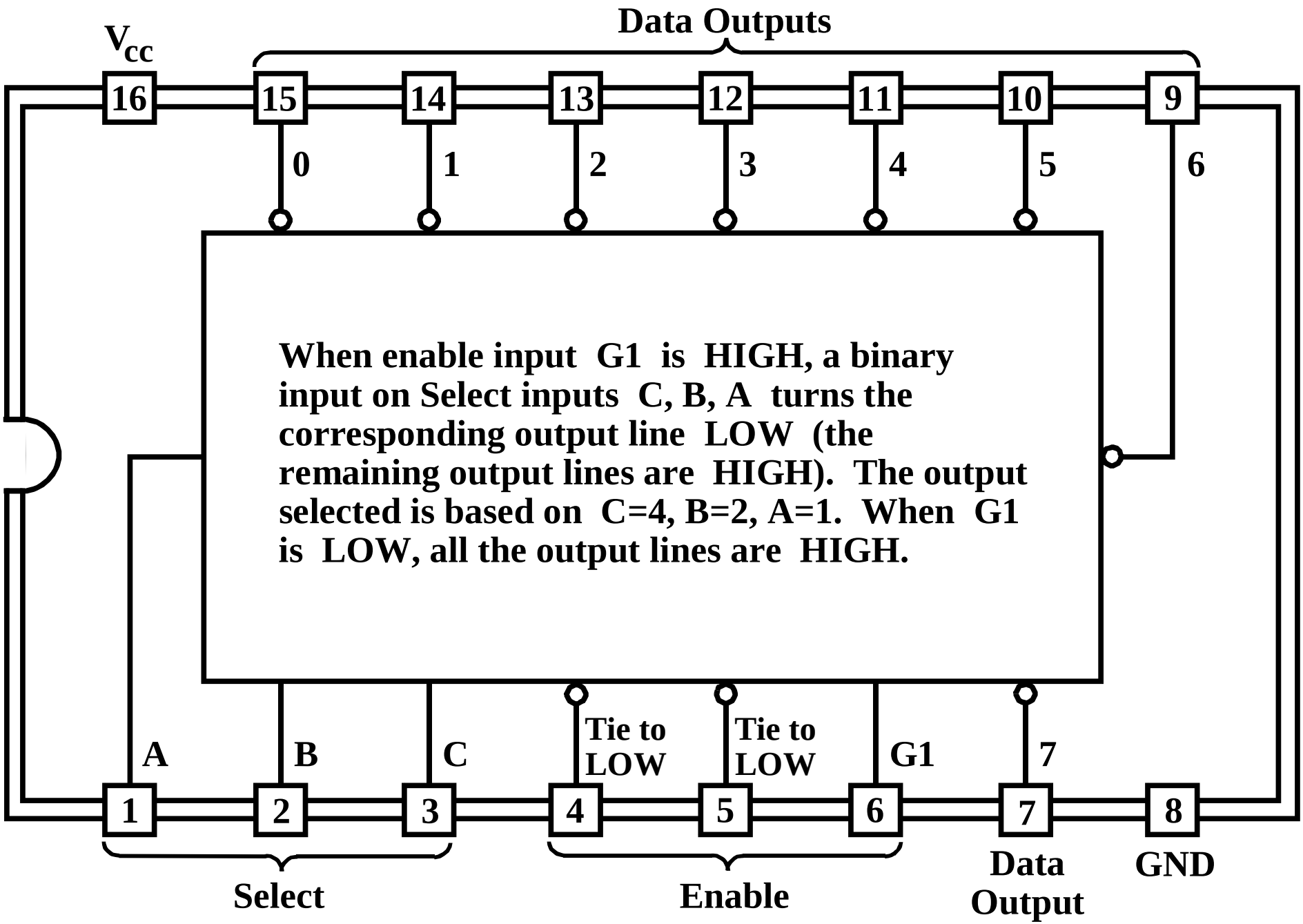
74151: 8-INPUT MULTIPLEXER



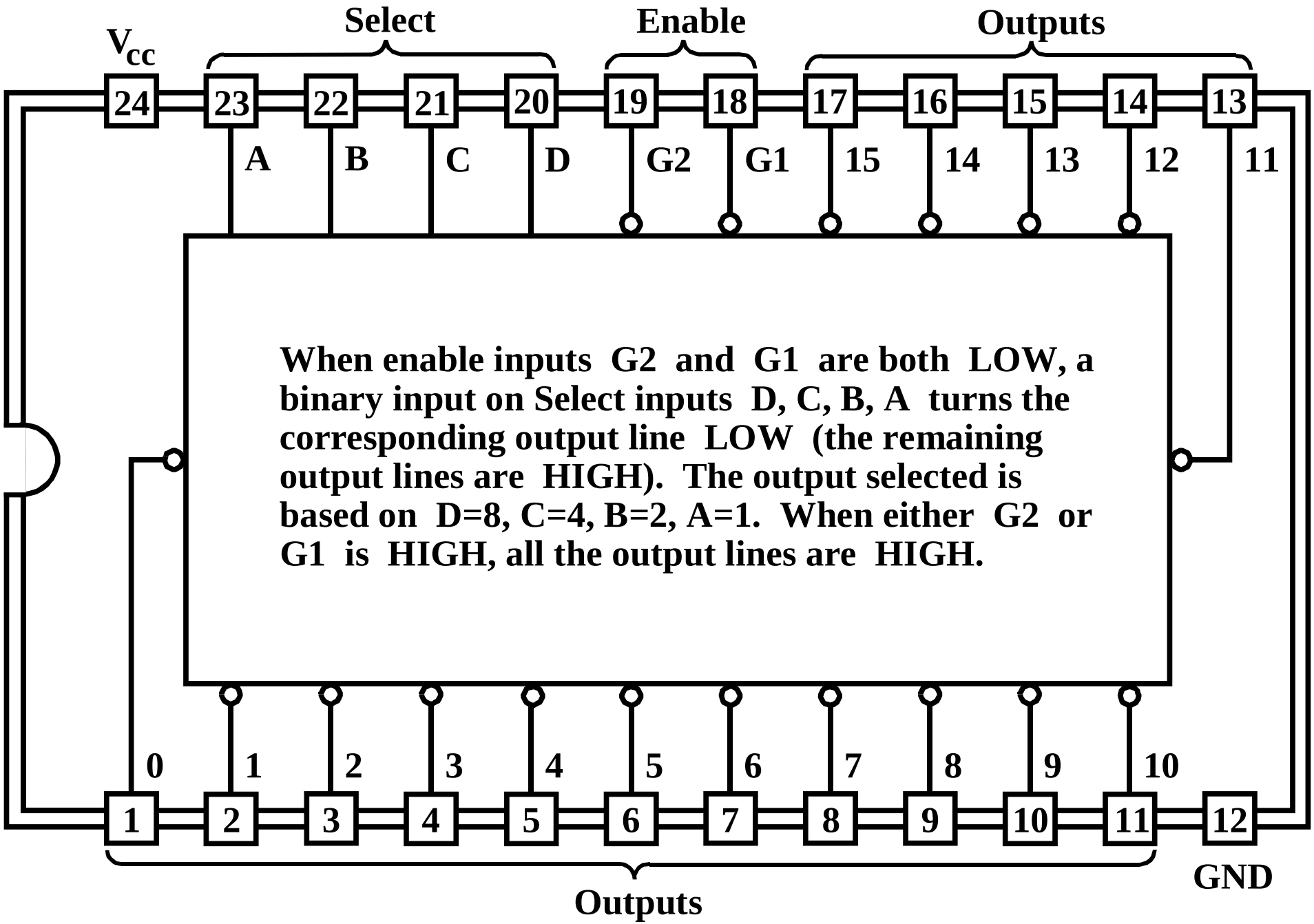
7442: 4 TO 10 LINE BCD TO DECIMAL DECODER



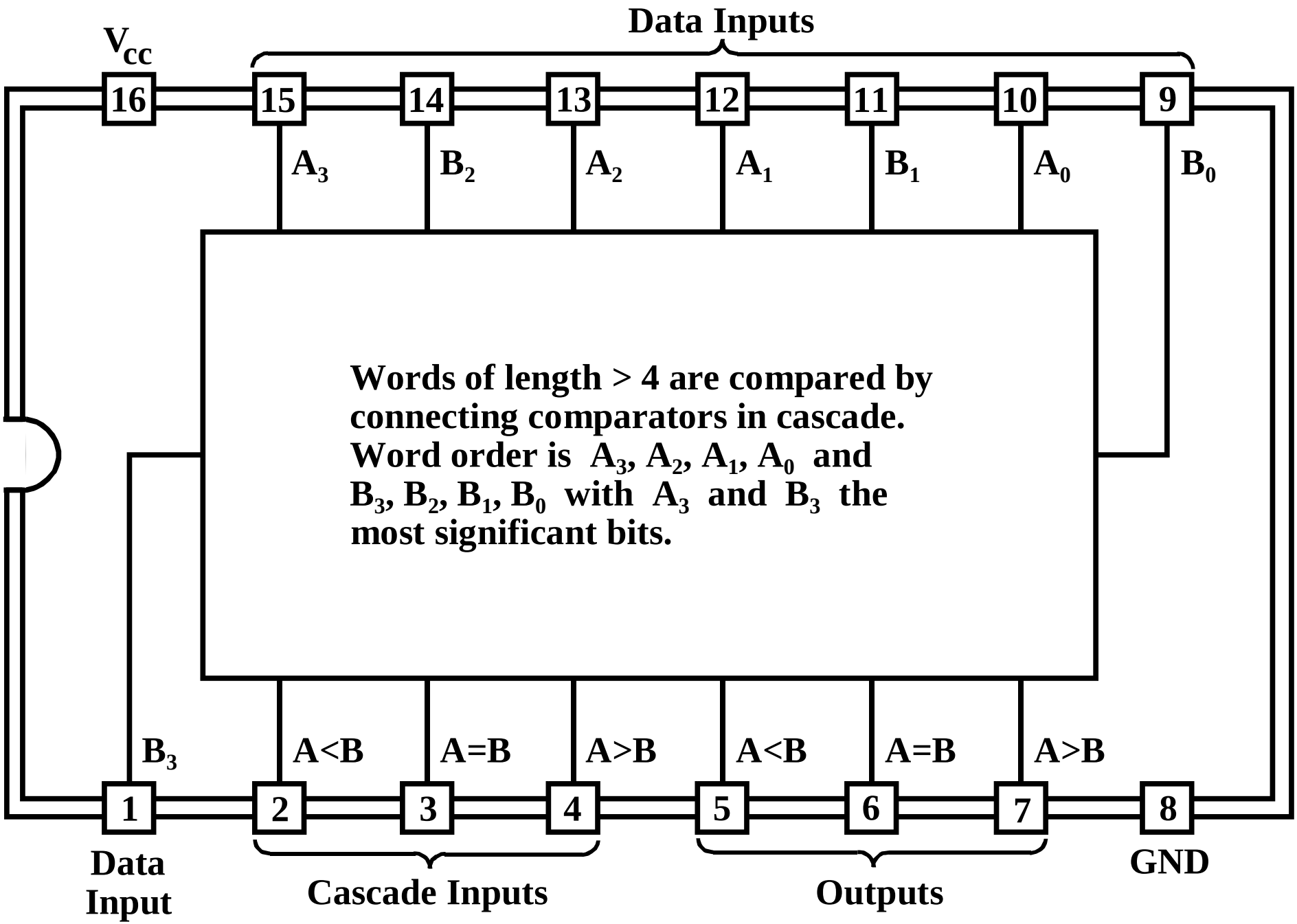
7447: BCD TO 7-SEGMENT DECODER DRIVER



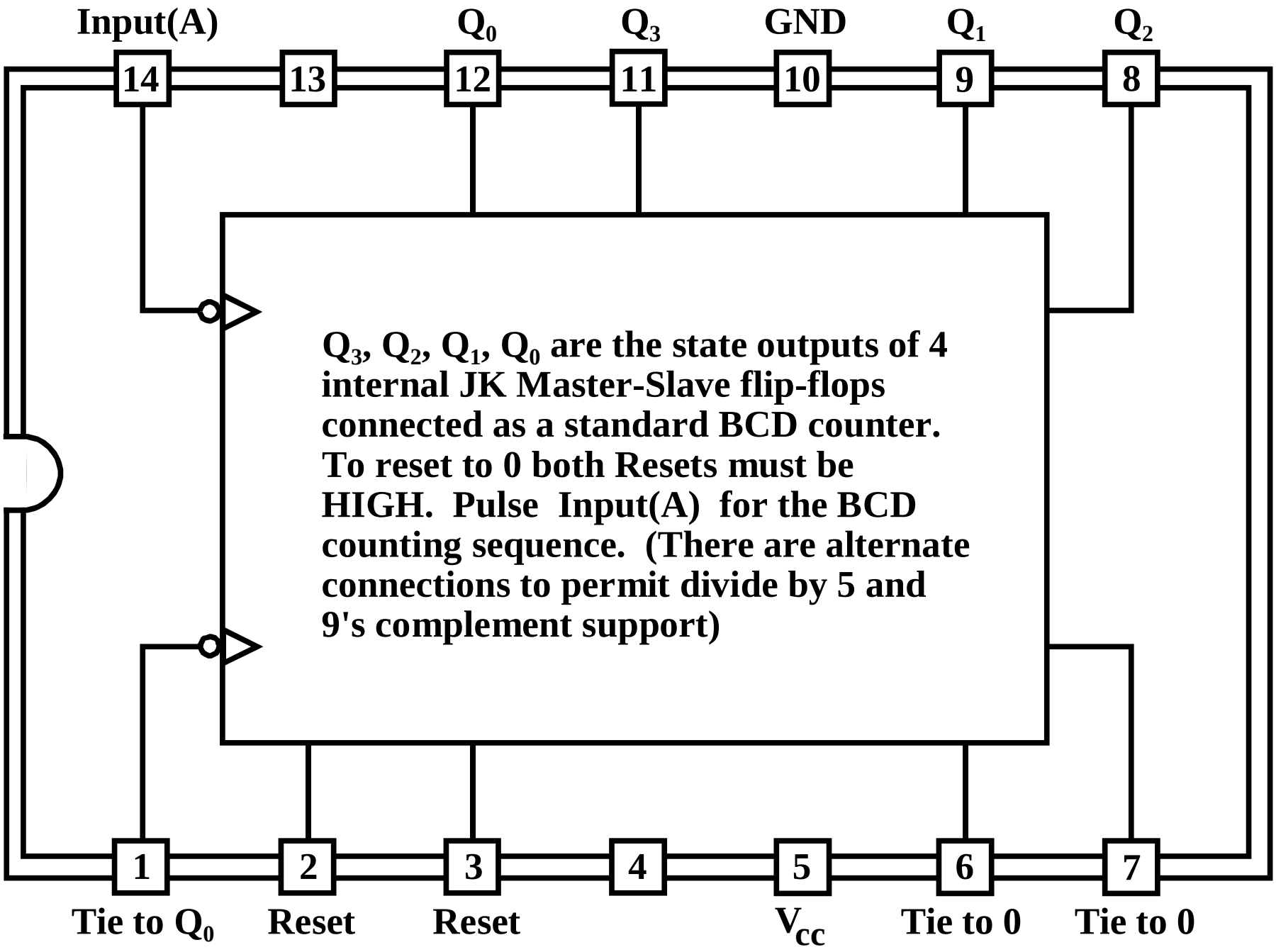
74138: 3 TO 8 DECODER/DEMULTIPLEXER



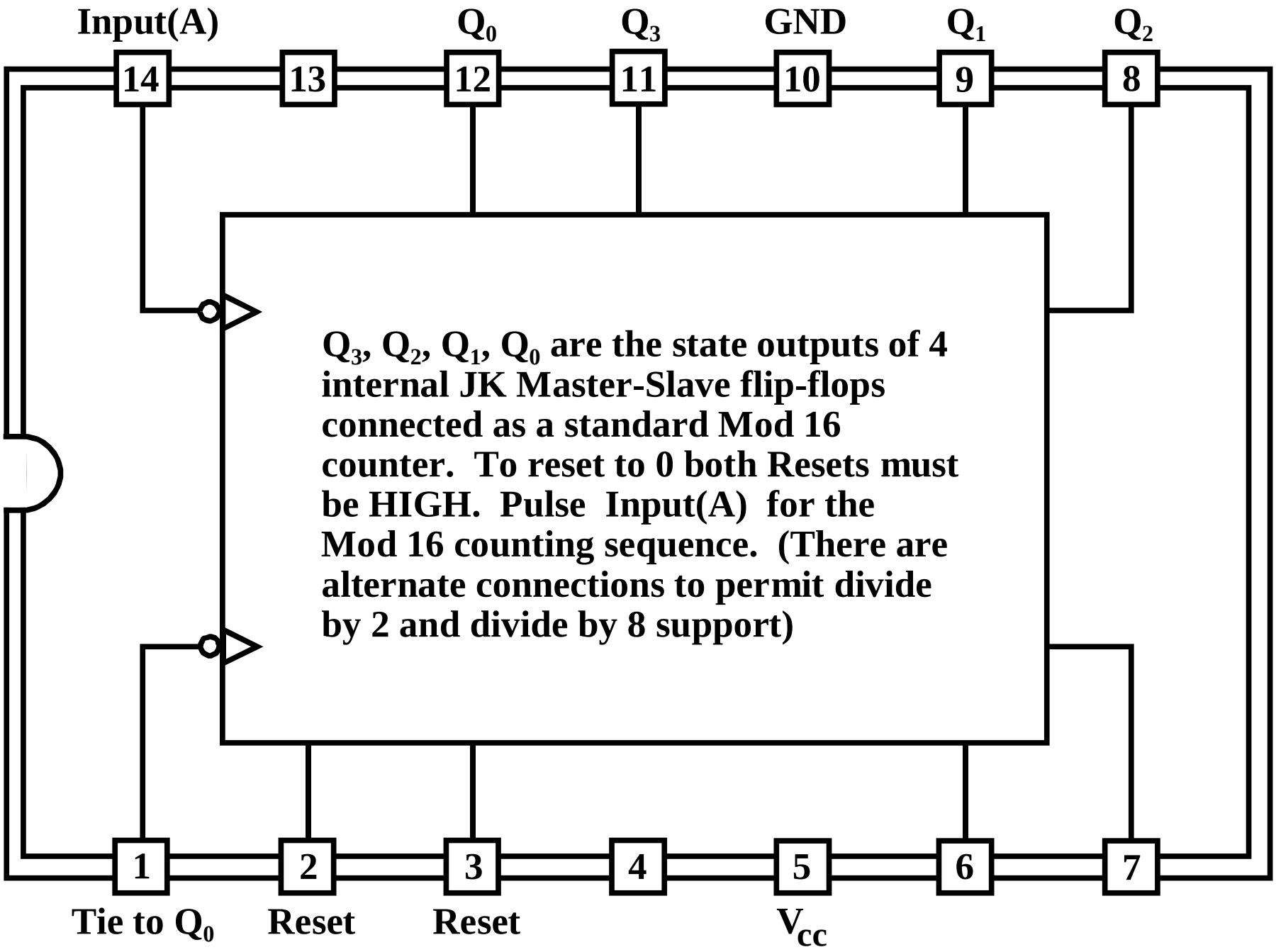
74154: 4 TO 16 LINE DECODER



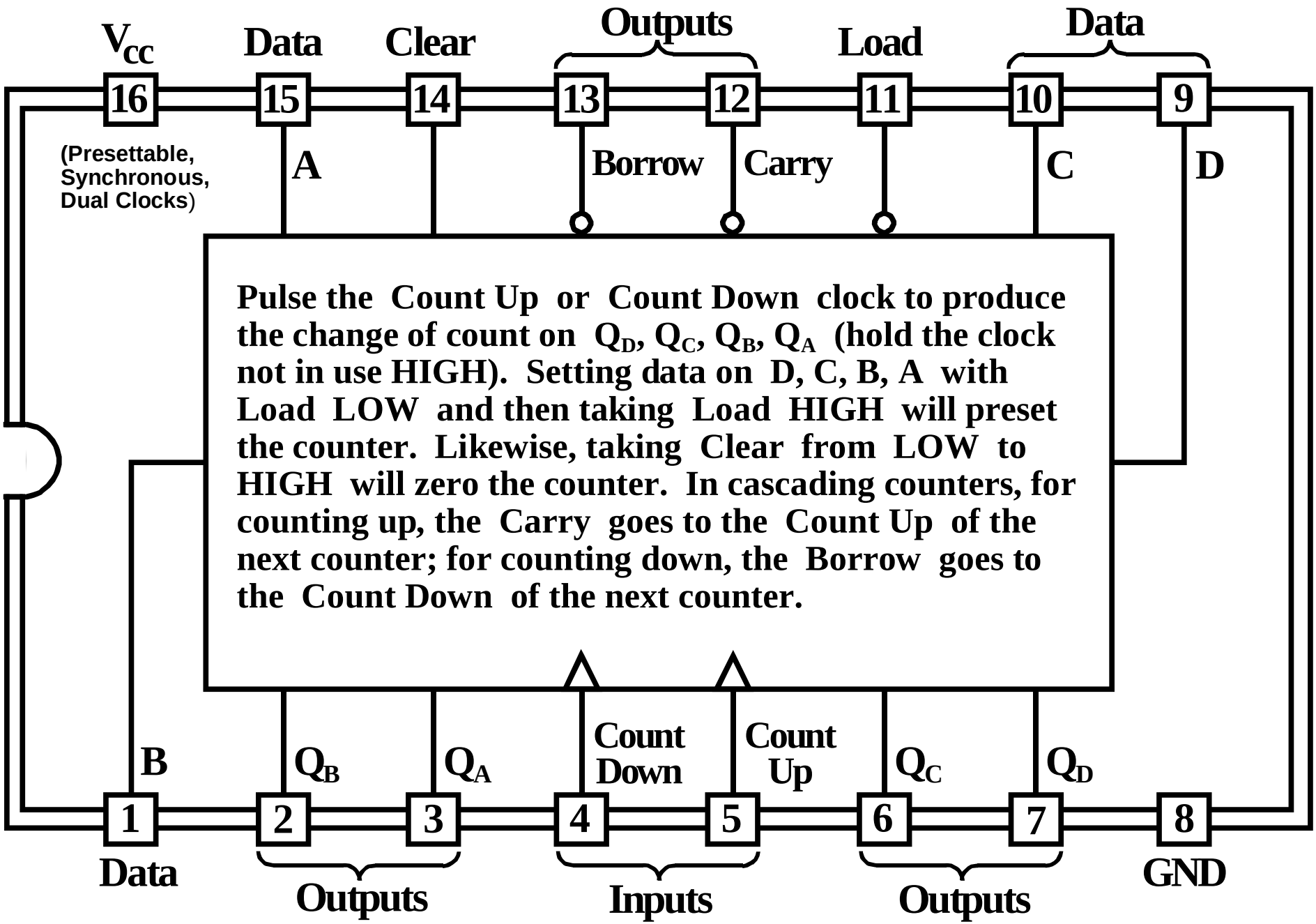
7485: 4-BIT MAGNITUDE COMPARATOR



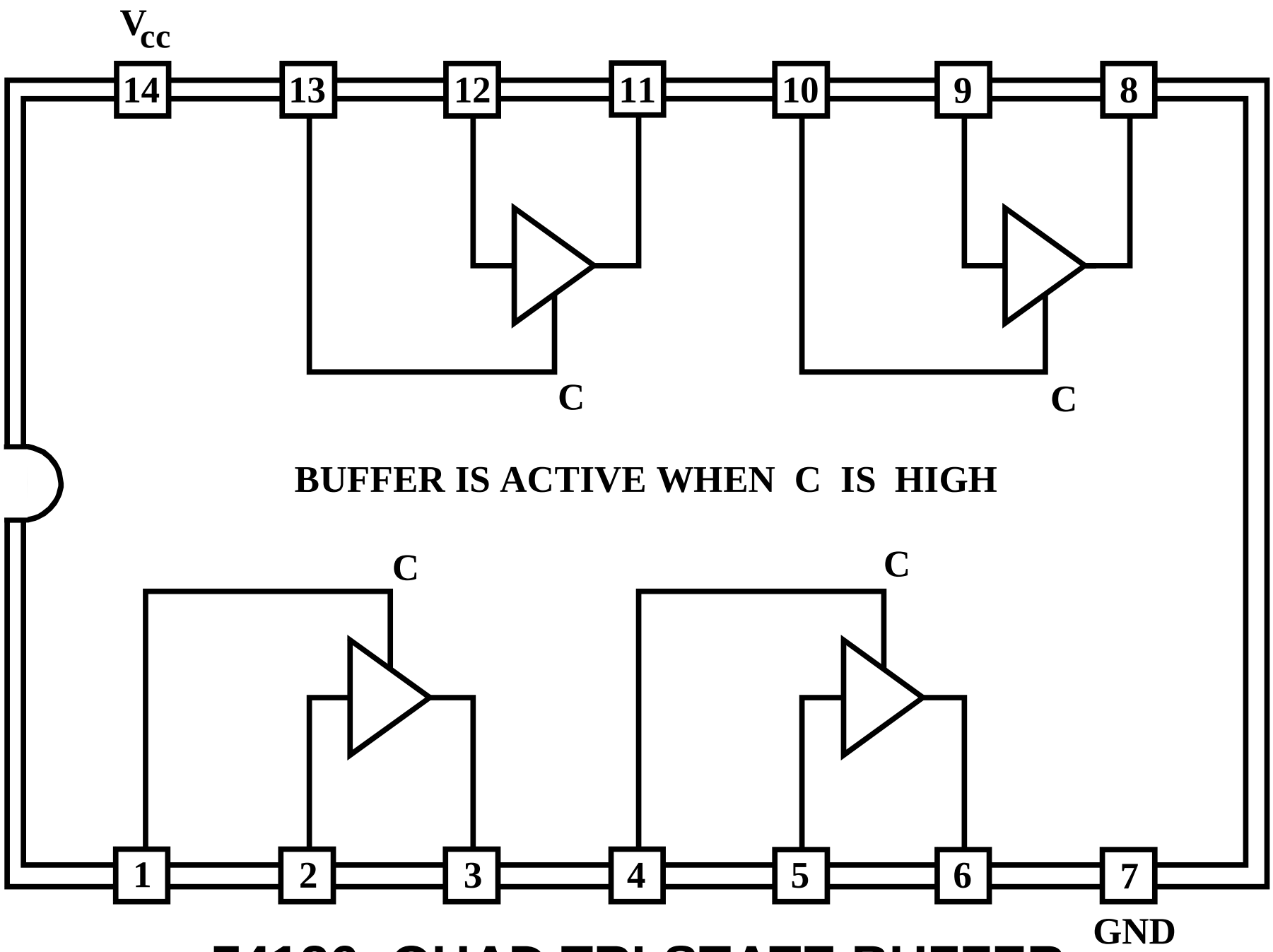
7490: DECADE COUNTER



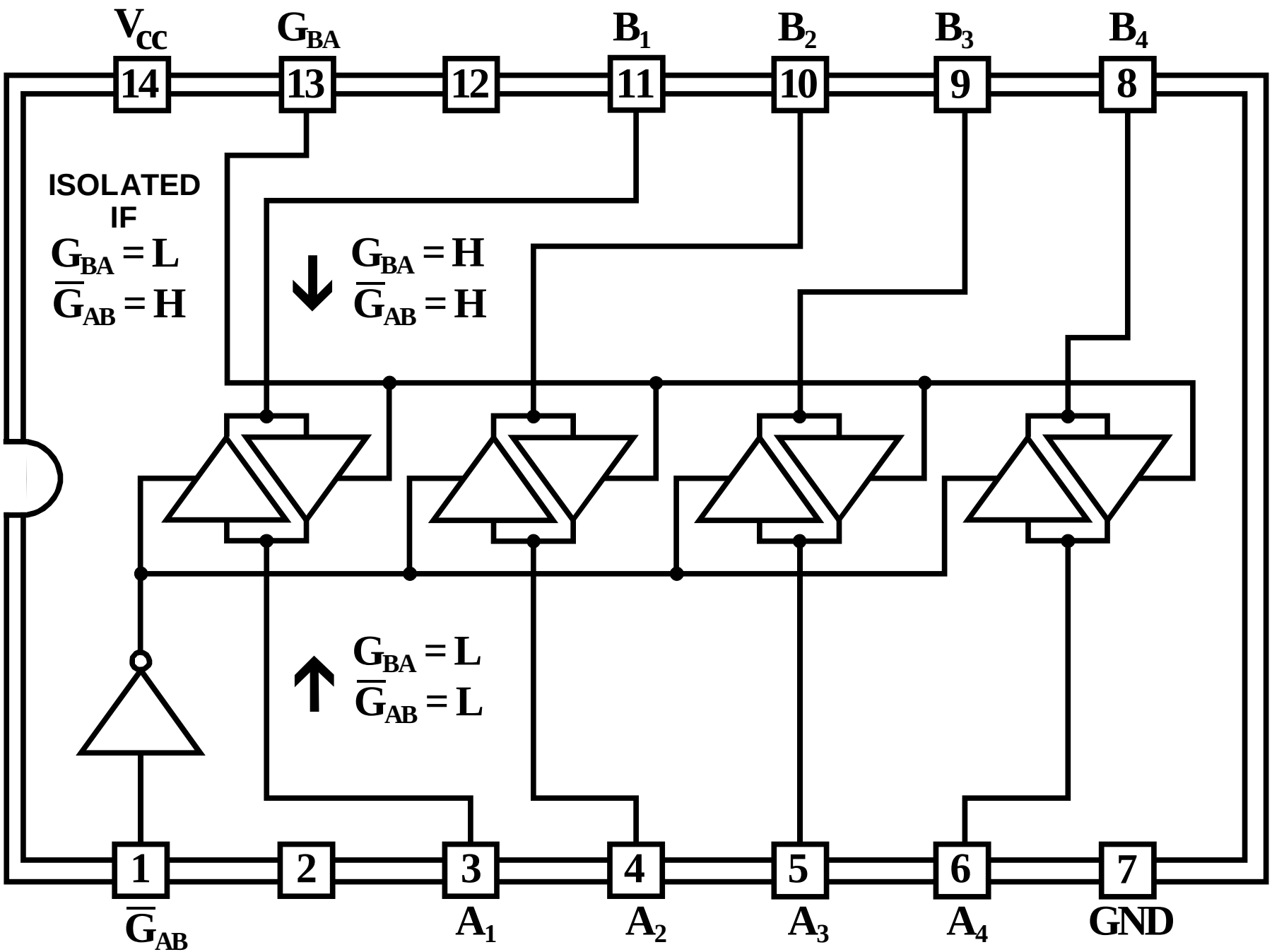
7493: 4-BIT BINARY COUNTER



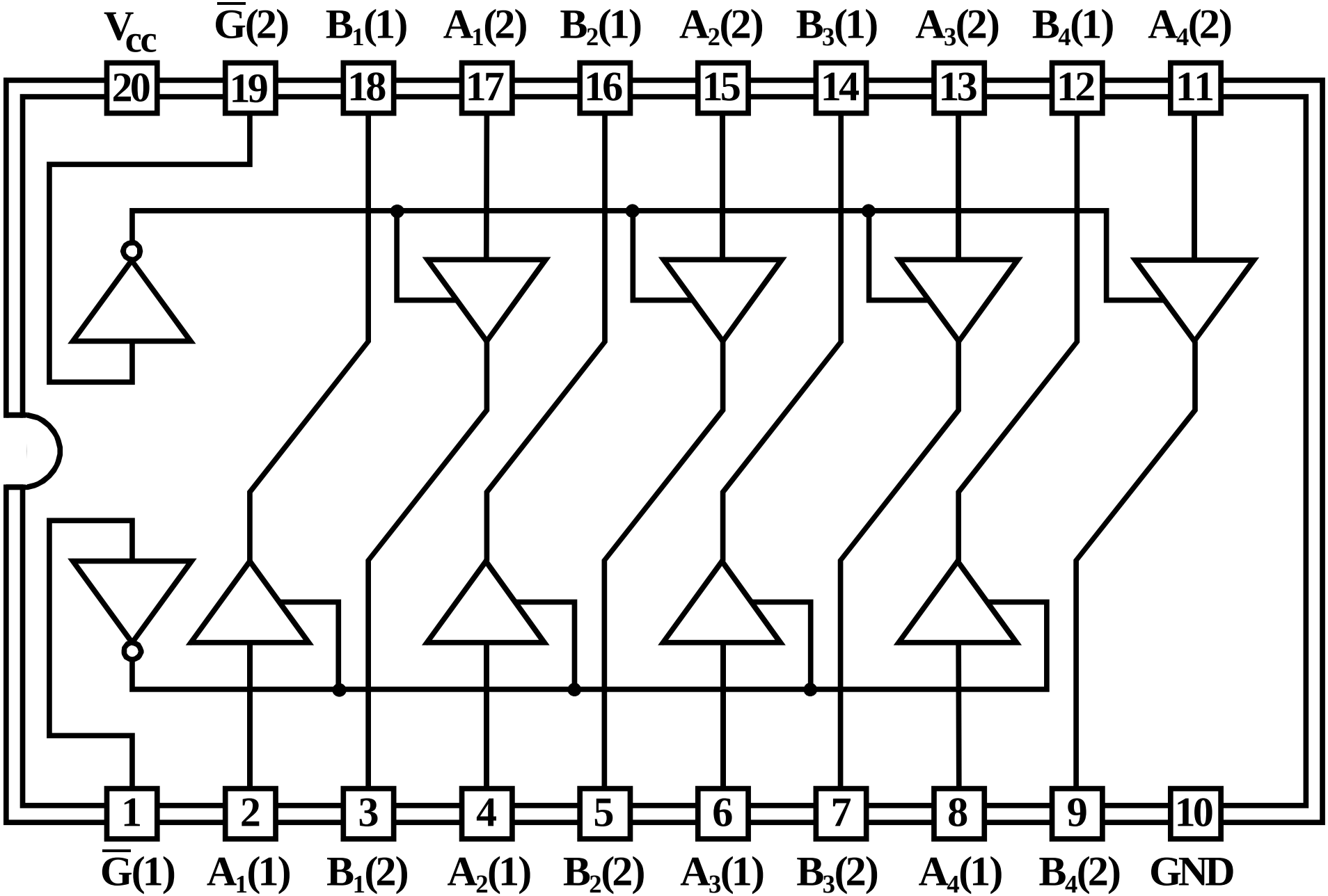
74193: 4-BIT BINARY UP/DOWN COUNTER



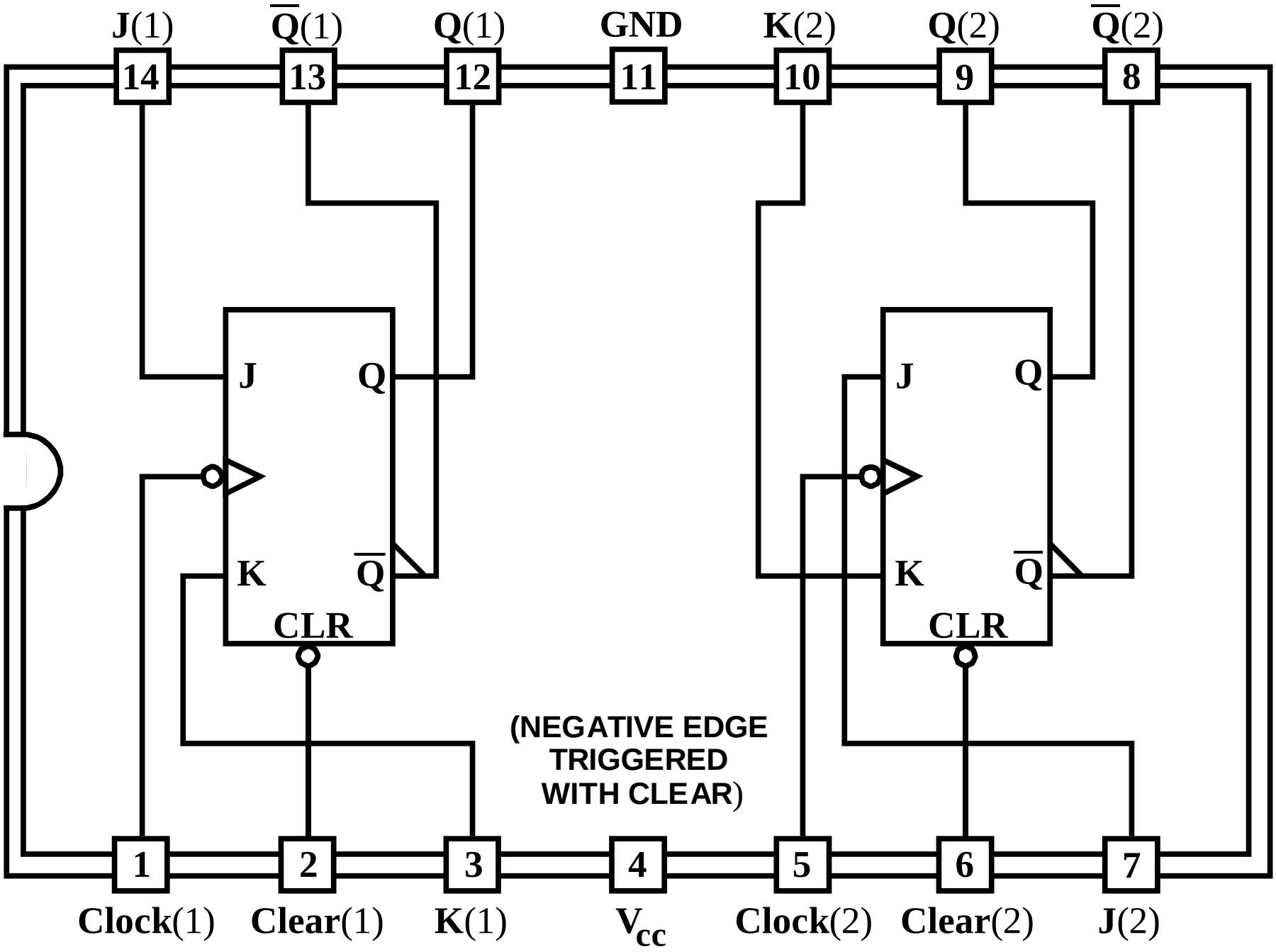
74126: QUAD TRI-STATE BUFFER



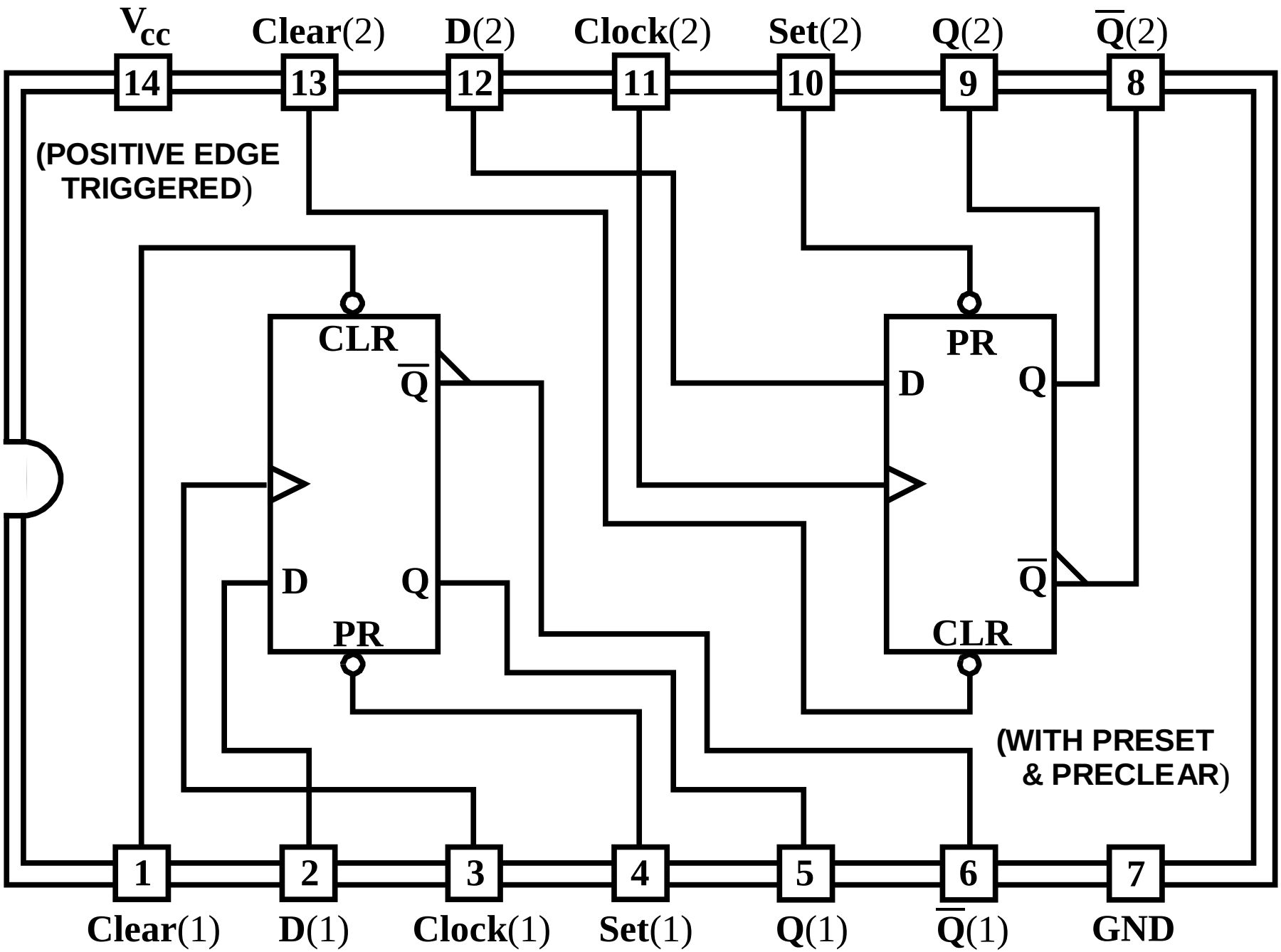
74243: QUADRUPLE BUS TRANSCEIVER



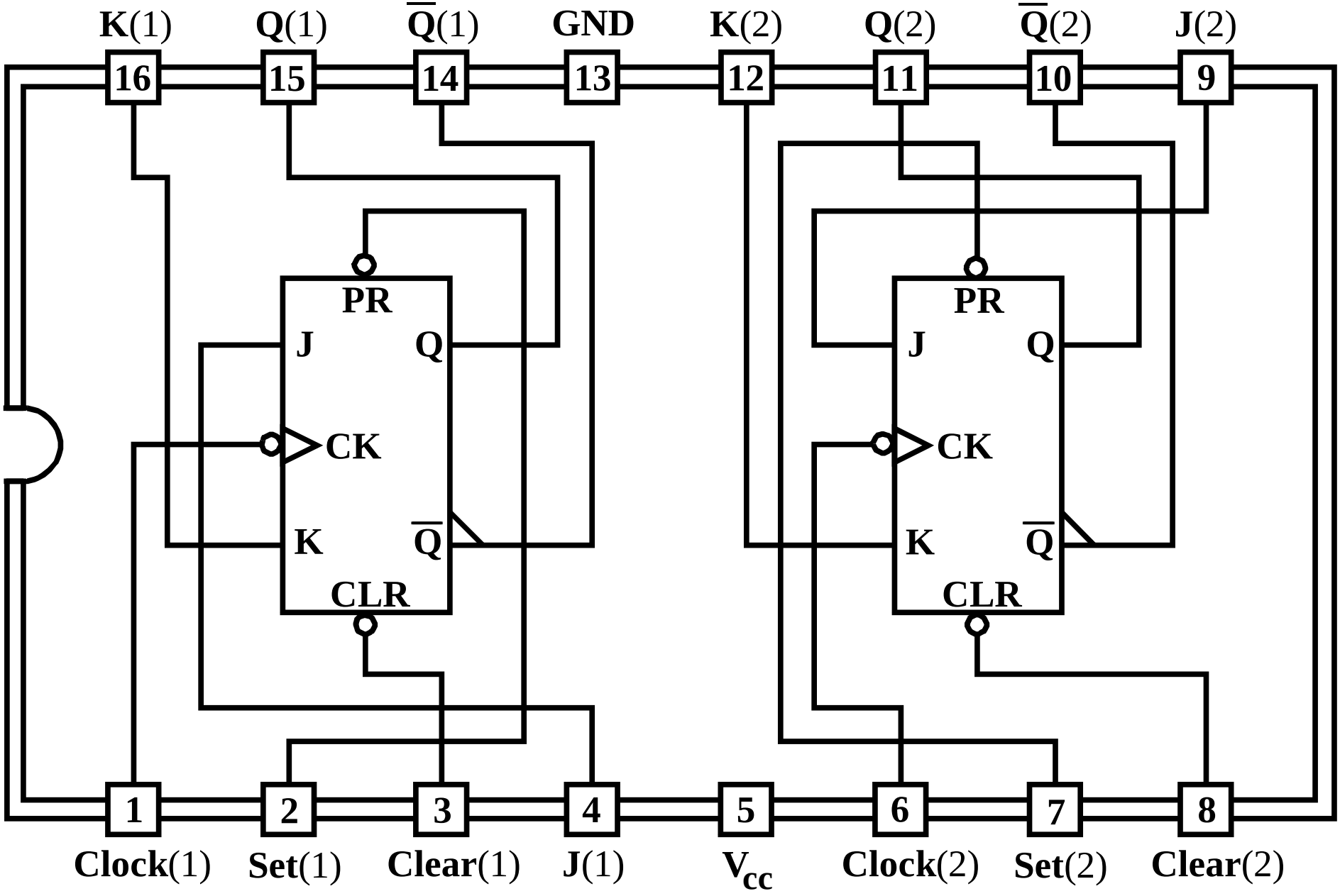
74244: OCTAL TRI-STATE BUFFERS/LINE DRIVERS



7473: DUAL JK MASTER-SLAVE FLIP-FLOP

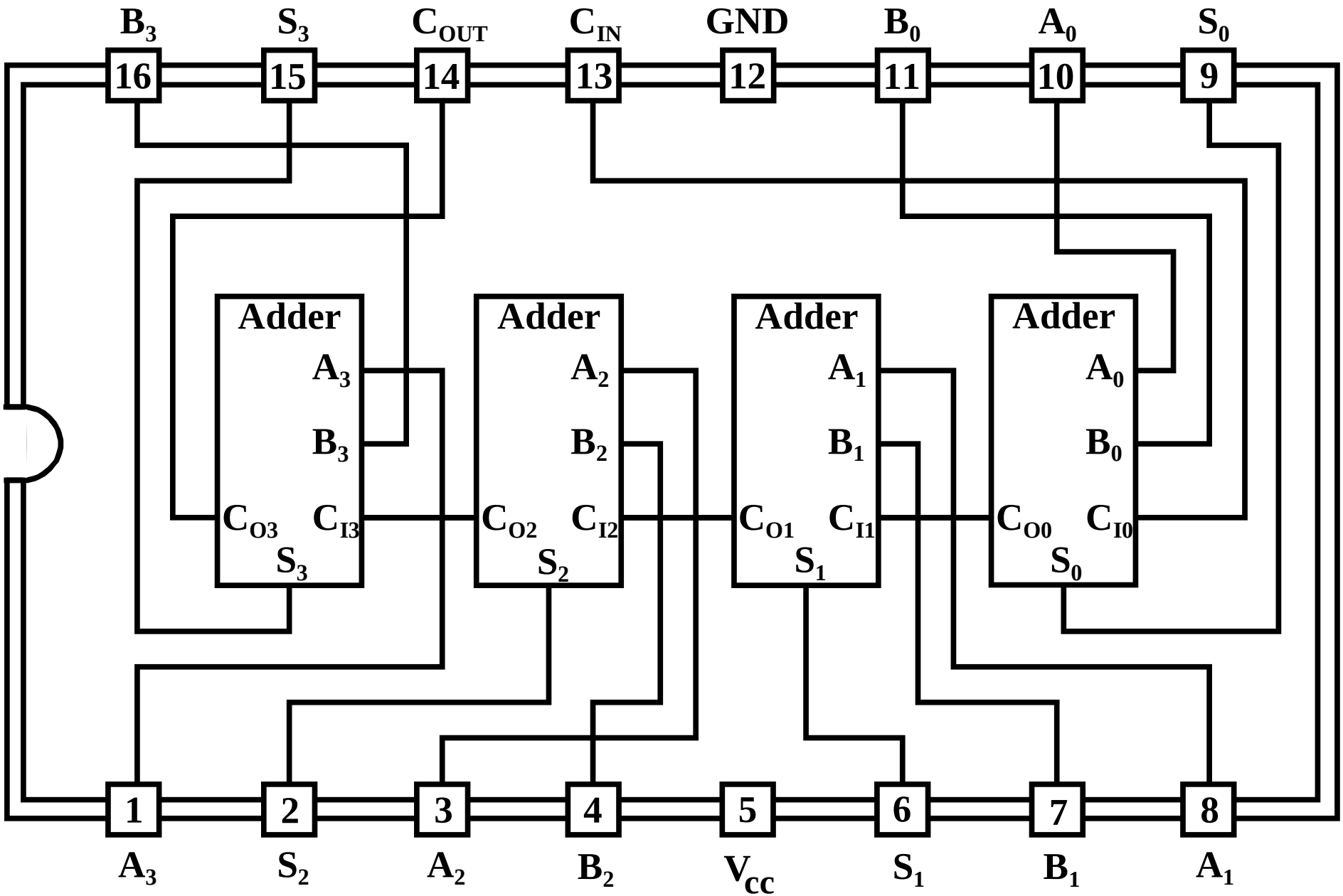


7474: DUAL D FLIP-FLOP

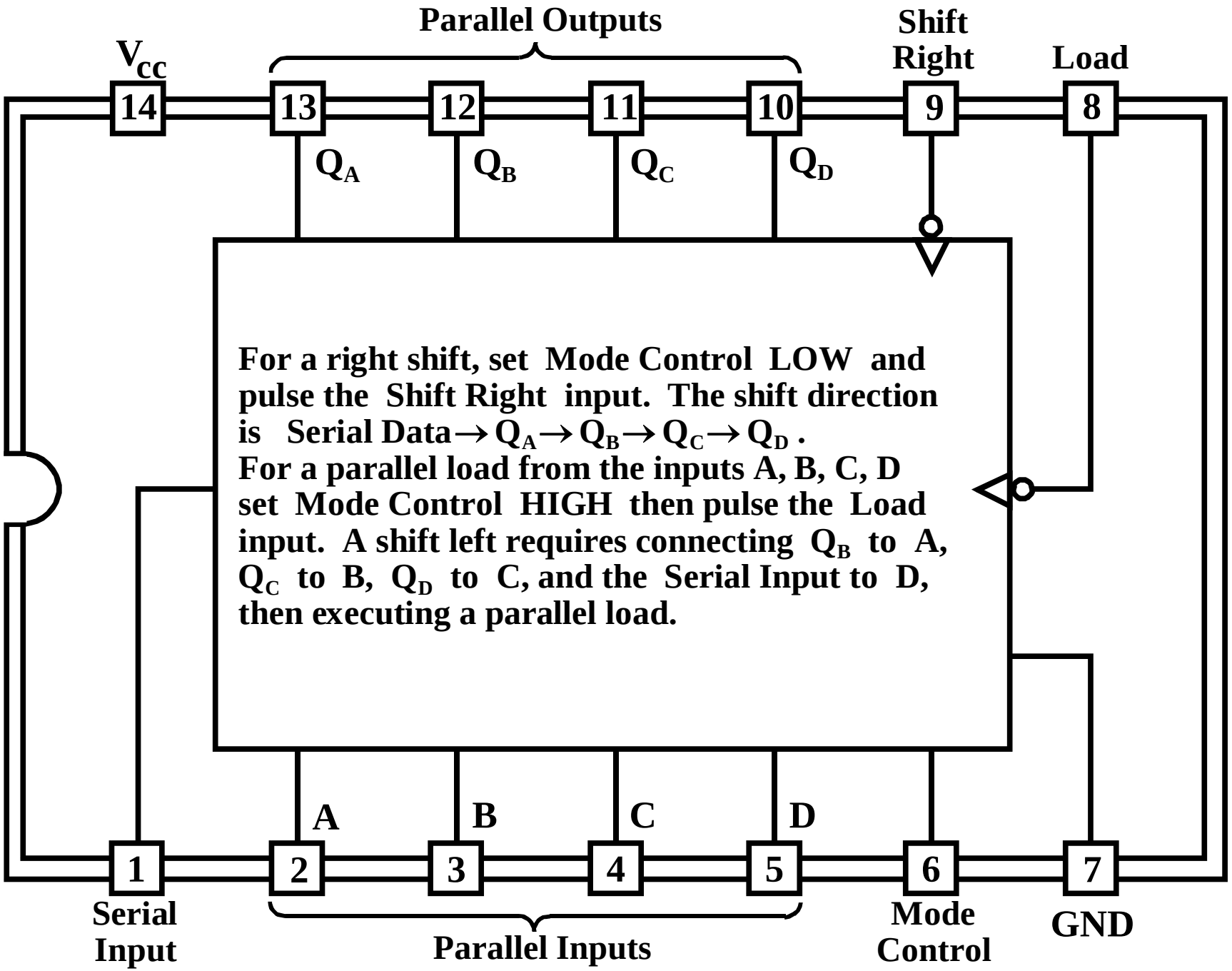


7476: DUAL JK MASTER-SLAVE FLIP-FLOP

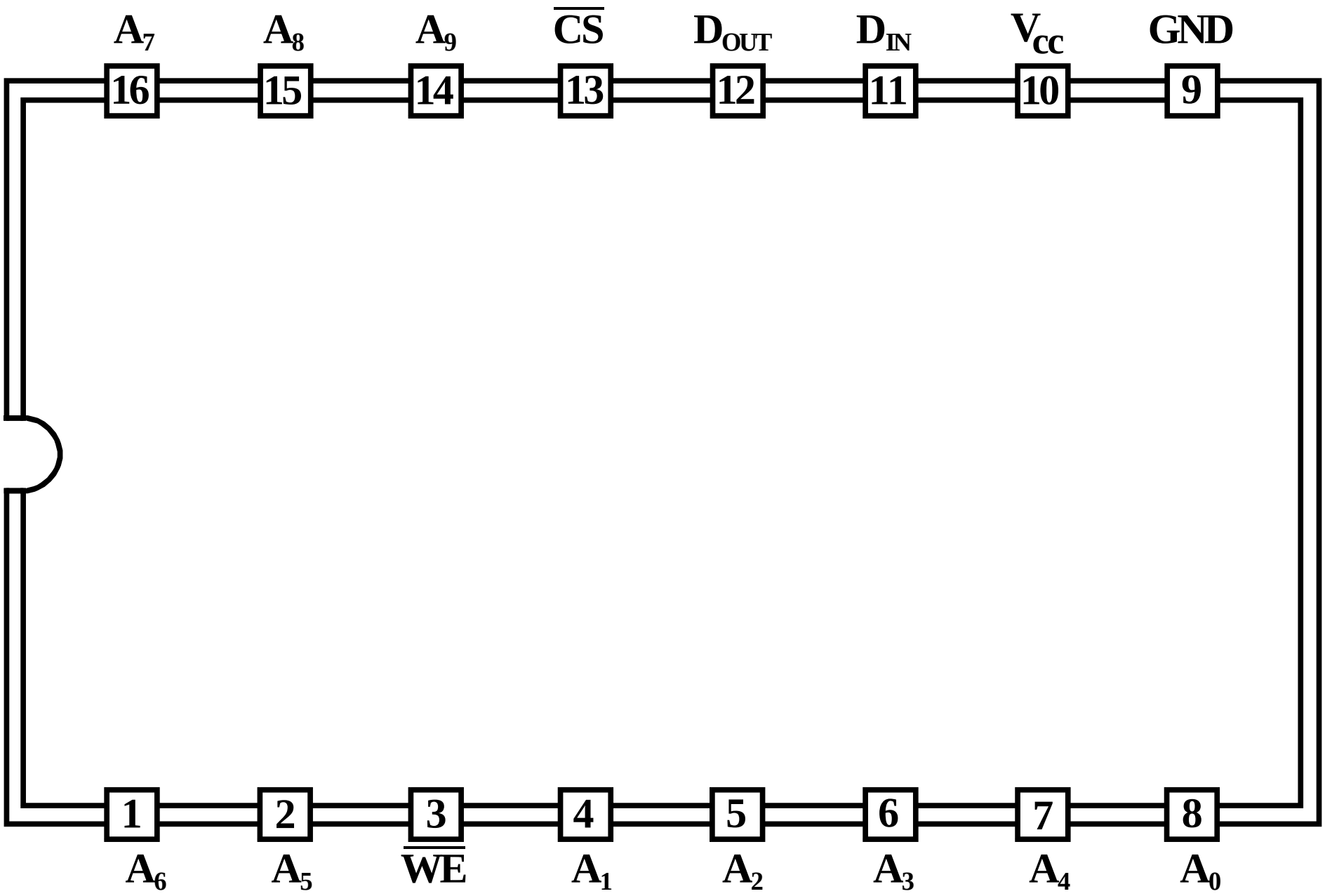
(WITH PRESET AND PRECLEAR, NEGATIVE EDGE TRIGGERED)



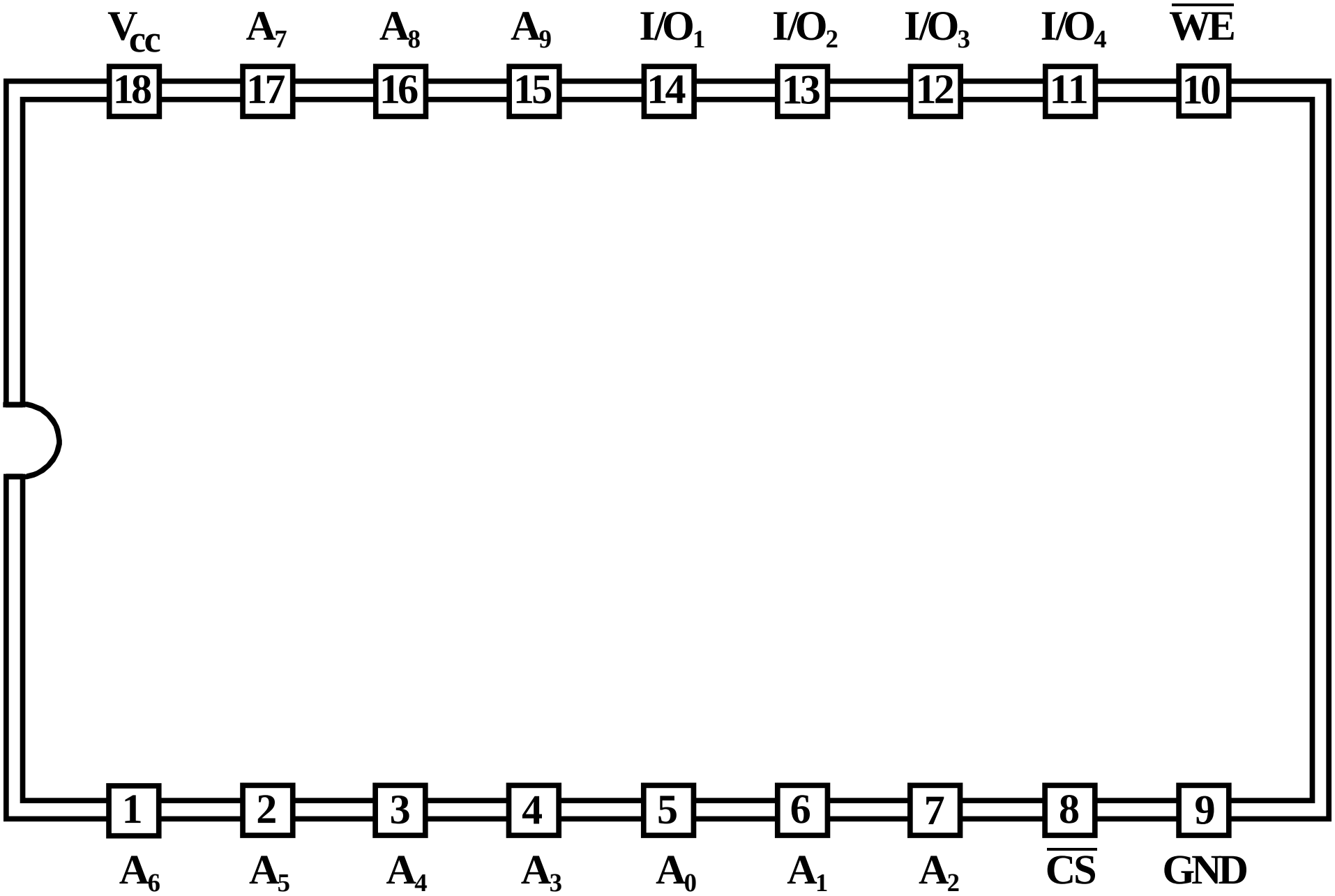
7483: 4-BIT BINARY FULL ADDER W/FAST CARRY



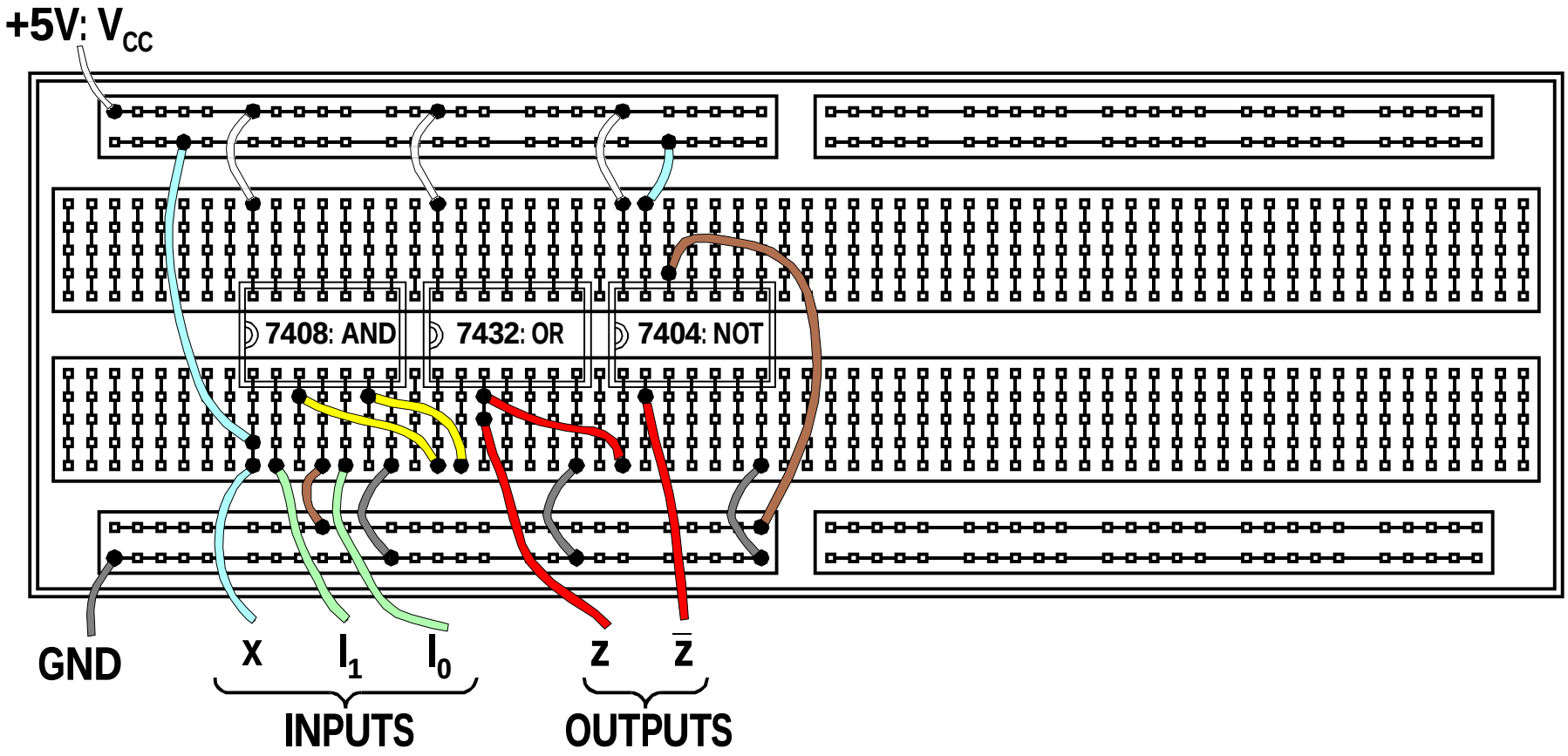
7495: 4-BIT BIDIRECTIONAL PARALLEL SHIFT REG

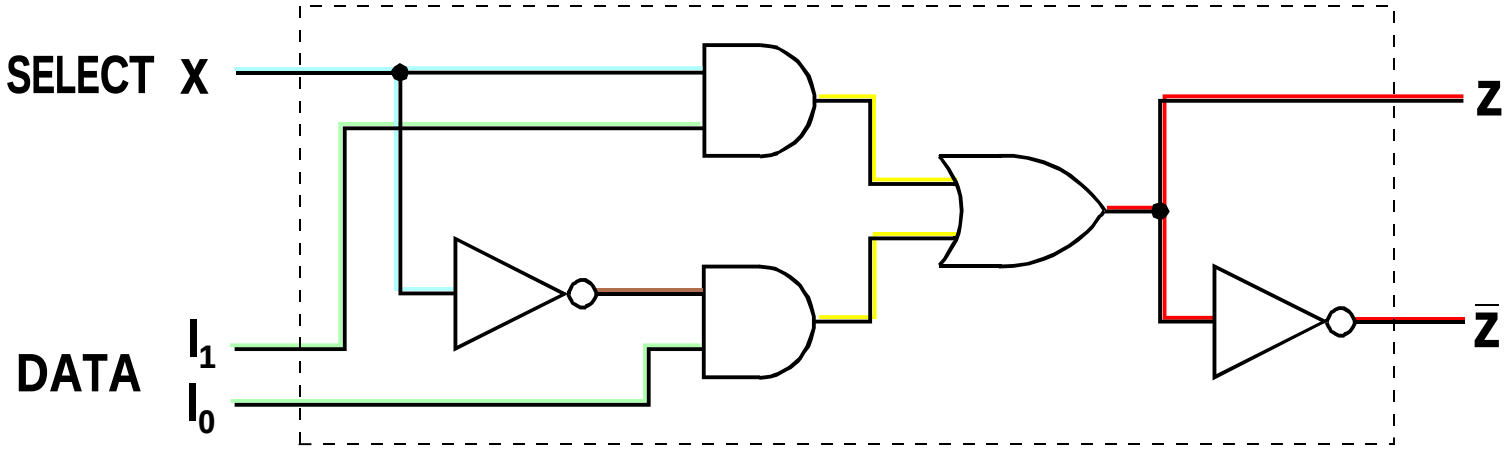


2102: 1K x 1-BIT STATIC RAM - Vcc = +5V



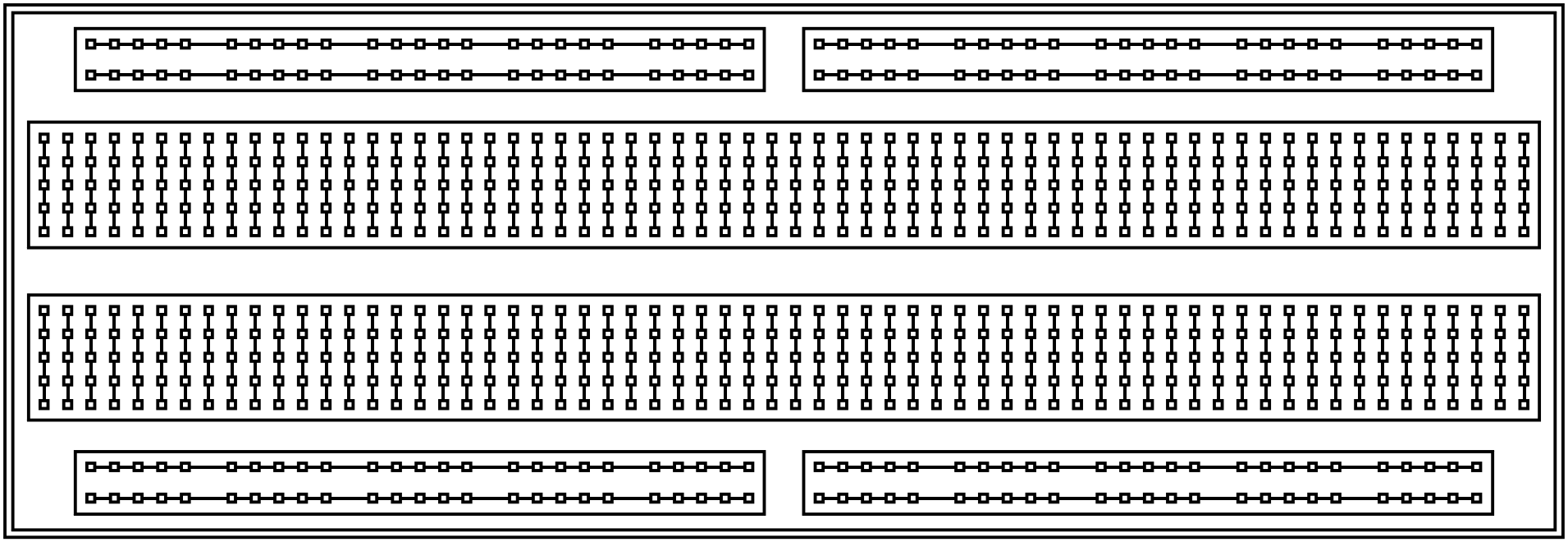
2114: 1K x 4-BIT STATIC RAM - Vcc = +5V





2-INPUT MULTIPLEXER

University of North Florida
Department of Computer and Information Sciences
Breadboard Template, 1999



University of North Florida
Department of Computer and Information Sciences
Breadboard Template, 1999