



FIGURE B.6.1 A plumbing analogy for carry lookahead for 1 bit, 2 bits, and 4 bits using water pipes and valves. The wrenches are turned to open and close valves. Water is shown in color. The output of the pipe ($c_i + 1$) will be full if either the nearest generate value (g_i) is turned on or if the i propagate value (p_i) is on and there is water further upstream, either from an earlier generate or a propagate with water behind it. CarryIn (c_0) can result in a carry out without the help of any generates, but with the help of all propagates.