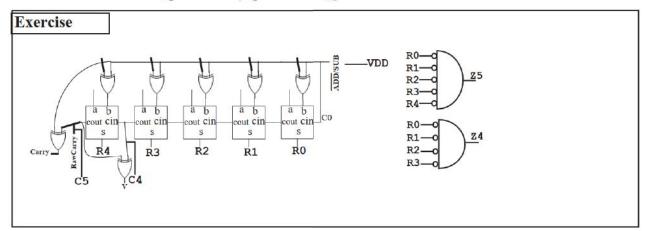
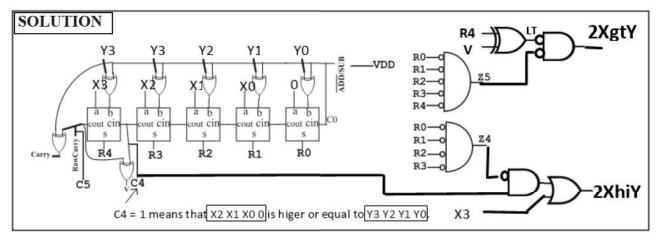
Preparatory exercise for future semesters

Given two 4-bit numbers X (X3 X2 X1 X0) and Y (Y3 Y2 Y1 Y0), we need to produce 2XgtY (2X is greater than Y, treating X and Y as signed numbers represented in 2's complement notation) and also 2XhiY (2X is higher than Y, treating X and Y as unsigned binary numbers). Use the following 5-bit ripple-carry adder/subtracter as a subtracter. Notice that C4 is also brought out. Is 2X higher, if X3 is a 1? If so, for unsigned comparison, we can manage with the lower 4-bit part of the 5-bit adder/subtracter! Note, that we are trying to produce, "gt", [not "gte" (greater or equal)] and it is "hi", [not "his" (higher or same)].





Space for your own notes:		