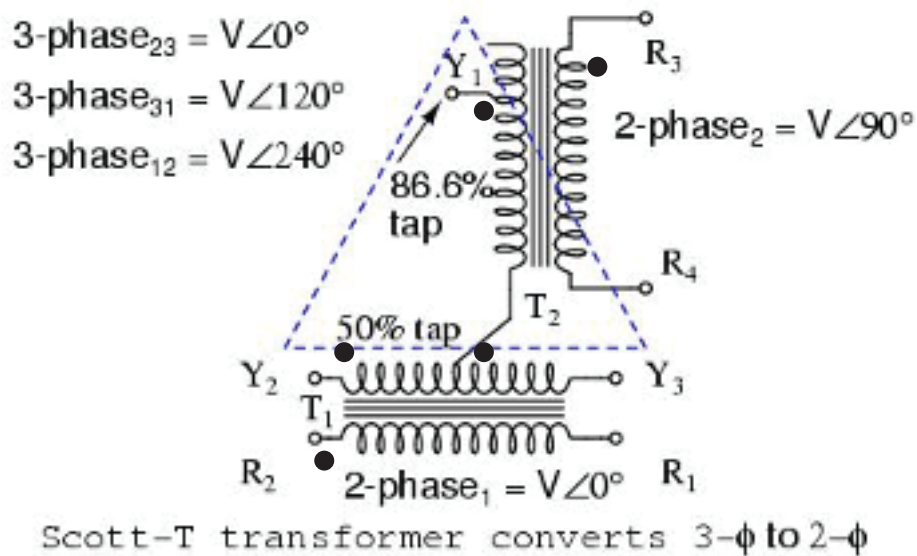


EECS 212
Special Problem 13-1 – Scott-T Transformer

The Scott-T transformer was invented in the 1890's by Charles Felton Scott. It is an ingenious design that converts balanced 3-phase voltages to balanced 2-phase voltages. It is still used for some motors.



Using the 3-phase sequence and dot convention defined in the figure, show that the two-phase voltages have the values shown in the figure. Assume that 2-phase₁ is defined from R_2 to R_1 , and 2-phase₂ is defined from R_3 to R_4 .

BTW, among other things, Charles Felton Scott was a graduate of THE Ohio State University was a professor of engineering at Yale University, was president of AIEE (now IEEE), and received the 1929 Edison Award from AIEE (now IEEE). Pretty smart guy!