Name:
Std. Id:

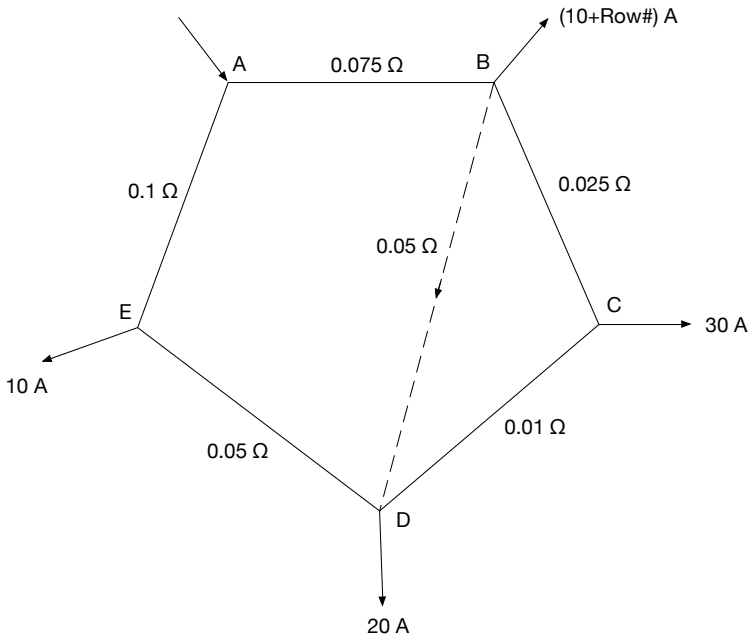
19.04.2020

Homework 1

1. The following ring distributor is fed from point A with a 230 V supply. The resistances are given for go and return conductors.
   a) Determine the voltage at each load point.
   b) If the points A and D are linked through an inter-connector of resistance 0.05 Ω, determine the new voltage at each load point.

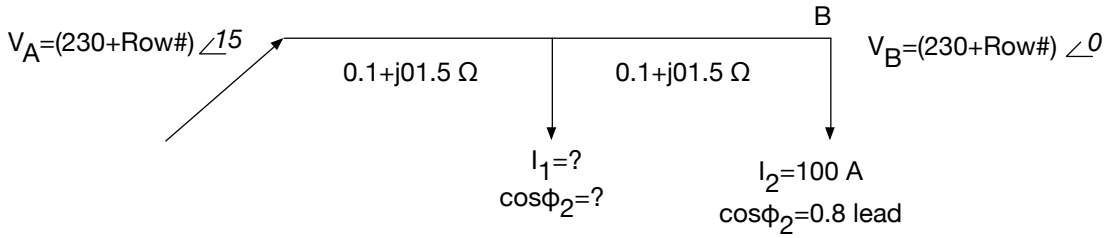
P.S. Do not multiply the resistances by 2, you can use the values directly. Row# indicates your row number in the class list which is given in Appendix.

Hint You can apply the Thevenin's Theorem for solving b)



2. A single phase distributor is shown below. At the far end, the voltage V_B = (230+Row#) V and the current is 100 A at a p.f. of 0.8 leading. Notice that phase angle ϕ_2 is between V_M and I_1.
   a) Find the current at point M, I1, and power factor, cos(ϕ2) by specifying the lagging or leading.
   b) Draw the phasor diagram

P.S. Here, Row# indicates again your row number in the class list which is given in Appendix.



Appendix

Row#	Student Id
1	116202009
2	115202027
3	115202056
4	115202018
5	115202036
6	116202151
7	116202138
8	116202069
9	116202147
10	116202021
11	111202022
12	115202044
13	117207071
14	115200084
15	115202111
16	114202079
17	115202086
18	115207053
19	116202065
20	116202002
21	115202119
22	115202081
23	115202078
24	116202135
25	115202016