

Q2. A transformer is rated 10 kVA, 60Hz. The parameters for the approximate equivalent circuit shown below are  $R_m = 80k\Omega$ ,  $X_m = 35k\Omega$ ,  $R_1 = 3\Omega$ ,  $X_1 = 10\Omega$ ,  $R_2 = 0.5\Omega$ ,  $X_2 = 2\Omega$ ,  $N_1 = 100$  and  $N_2 = 20$ . The rated secondary full load. The transformer is connected to an impedance of  $2 + j3\Omega$ . Calculate the secondary and primary current of the transformer if the primary side is connected to a  $6350.85 \angle 15^\circ V$  source.

250.535 -339.63  
422

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250.835 -339.63  
482