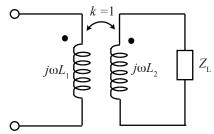
## Flyback Transformer Proof

A flyback transformer is one that has maximum coupling between the primary and secondary windings, but the inductances of the windings are not large enough to be considered infinite.

Consider the flyback transformer below that is connected to an impedance  $Z_L$ , where  $Z_L$  is arbitrary.



Show that the equivalent circuit shown below has exactly the same input admittance as seen from the left, where N1 and N2 are the # of windings in inductors 1 and 2, respectively.

