

10 Ramped Transformer Calculation Questions using $(V_p / V_s = N_p / N_s)$

1. A phone charger transformer has 240 V on the primary coil and 12 V on the secondary coil. The primary coil has 2000 turns. How many turns are on the secondary coil?
2. A doorbell transformer reduces 230 V to 10 V. The primary coil has 1150 turns. Calculate the number of turns on the secondary coil.
3. A toy train transformer increases 20 V to 100 V. The primary coil has 80 turns. How many turns are on the secondary coil?
4. A power station transformer increases 25000 V to 400000 V. The primary coil has 5000 turns. Calculate the number of turns on the secondary coil.
5. A transformer has 500 turns on the primary coil and 50 turns on the secondary coil. The primary voltage is 230 V. What is the secondary voltage?
6. A solar-powered garden lighting system uses a transformer with 120 turns on the primary coil and 900 turns on the secondary coil. The primary voltage is 8 V. Calculate the secondary voltage.
7. A factory machine requires 110 V. A transformer connected to a 230 V supply has 2300 turns on the primary coil. How many turns should the secondary coil have?
8. A transformer has 1200 turns on the primary coil and 150 turns on the secondary coil. The secondary voltage is 30 V. Calculate the primary voltage.
9. A wind turbine generates 800 V which is increased to 33000 V before entering the National Grid. If the primary coil has 400 turns, calculate the number of turns on the secondary coil.
10. A transformer is used to power stage lighting. The primary voltage is 240 V and the secondary voltage is 24 V. The secondary coil has 80 turns. Calculate the number of turns on the primary coil.