ACT: Transformers

iron

V_p V_s R

N_P
(primary)

N_S
(secondary)
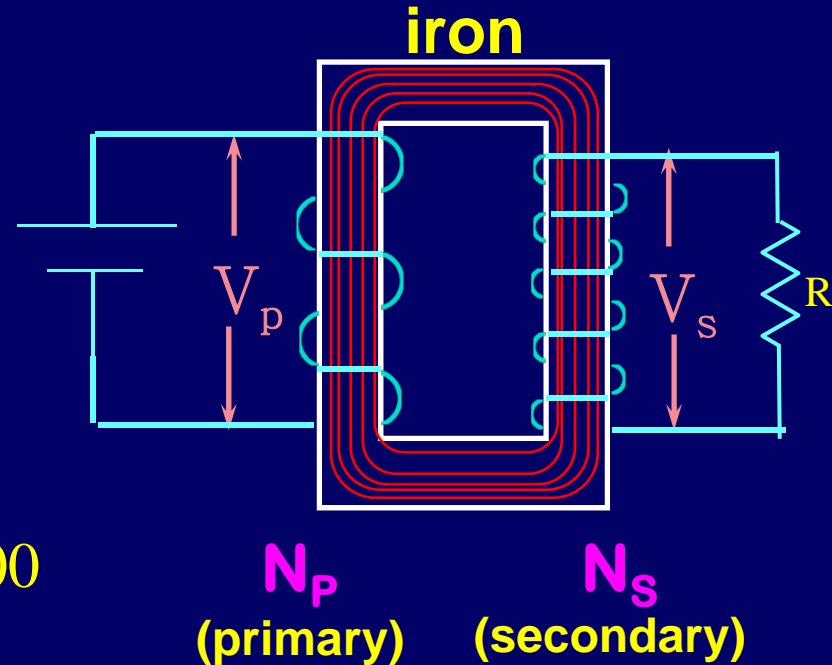
A 12 Volt battery is connected to a transformer transformer that has a 100 turn primary coil, and 200 turn secondary coil. What is the voltage across the secondary after the battery has been connected for a long time?

1) $V_s = 0$ 2) $V_s = 6$ 3) $V_s = 12$ 4) $V_s = 24$