10. Using the same method as in the previous problem we obtain

$$
\begin{aligned}
& N_{2}=\left(V_{2} / V_{1}\right) N_{1} \\
& N_{2}=(10,000 \mathrm{~V} / 2000 \mathrm{~V})(100 \text { turns }) \\
& N_{2}=500 \text { turns }
\end{aligned}
$$

