

Answer on Question #42901, Physics, Electric Circuits

39. Conditions: $\varepsilon = 0.15V$; $r = 0.25\Omega$; $R = 10\Omega$; $N = 10$; $n = 3$; $I = ?$.

Solution:

Period of the oscillation T:

$$I = V/R;$$

$$i = I/N;$$

$$V = 3\varepsilon - 3ri = 3\varepsilon - 3rI/N;$$

$$I = 3\varepsilon/R - 3rI/NR;$$

$$I = 3\varepsilon N/(3r + NR) = 0.045A.$$

Answer: $I = 0.045A$. c)

