



Basic Electricity – Unit 16: Transformers

Exercise 2

1. Use the following formula and calculate the secondary voltage and current.

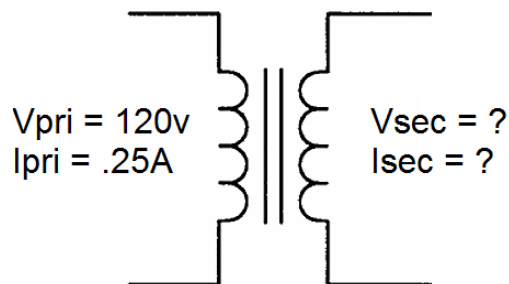
$$\frac{V_{\text{sec}}}{V_{\text{pri}}} = \frac{N_{\text{sec}}}{N_{\text{pri}}} = \frac{I_{\text{pri}}}{I_{\text{sec}}}$$

Power in = Power out

$N_{\text{sec}} = 10$ turns

$$n = \frac{N_{\text{sec}}}{N_{\text{pri}}} = \frac{I_{\text{pri}}}{I_{\text{sec}}} = 1:10$$

Problem



$V_{\text{sec}} =$ _____

$I_{\text{sec}} =$ _____



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Solutions:

1. Use the following formula and calculate the secondary voltage and current.

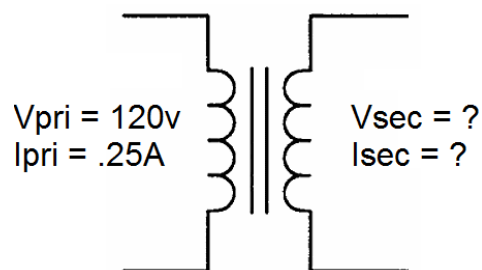
$$\frac{V_{\text{sec}}}{V_{\text{pri}}} = \frac{N_{\text{sec}}}{N_{\text{pri}}} = \frac{I_{\text{pri}}}{I_{\text{sec}}}$$

$$\text{Power in} = \text{Power out}$$

$$N_{\text{sec}} = 10 \text{ turns}$$

$$n = \frac{N_{\text{sec}}}{N_{\text{pri}}} = \frac{I_{\text{pri}}}{I_{\text{sec}}} = 1:10$$

Problem



$$V_{\text{sec}} = \underline{\hspace{2cm}} 12\text{v} \underline{\hspace{2cm}}$$

$$I_{\text{sec}} = \underline{\hspace{2cm}} 2.5 \text{ A} \underline{\hspace{2cm}}$$





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