No 12.1.1

$A = 230\ cm^2 = 0,023\ m^2$

$B = \dfrac{\phi}{A} \Rightarrow \phi = B \cdot A = 1,3 \cdot 0,023 = \underline{0,0299\ Wb}$

No 12.1.2

$\phi = 317,9\ \mu Wb = 3,179 \cdot 10^{-4}\ Wb$

$A = 1,7\ cm^2 = 1,7 \cdot 10^{-4}\ m^2$

$B = \dfrac{\phi}{A} = \dfrac{3,179 \cdot 10^{-4}}{1,7 \cdot 10^{-4}} = \underline{1,87\ T}$

No 12.1.3

$\phi = 0,0002255\ Wb = 2,255 \cdot 10^{-4}\ Wb$

$A = \dfrac{\phi}{B} = \dfrac{2,255 \cdot 10^{-4}}{1,1} = \underline{2,05 \cdot 10^{-4}\ m^2} = \underline{2,05\ cm^2}$

No 12.1.4

$A = \ell^2 = 0,018^2 = 3,24 \cdot 10^{-4}\ m^2$

$\phi = B \cdot A = 1,15 \cdot 3,24 \cdot 10^{-4} = \underline{3,726 \cdot 10^{-4}\ Wb} = \underline{0,3726\ mWb}$

No 12.1.5

$A = \phi^2 \cdot 0,785 = 0,022^2 \cdot 0,785 = 3,799 \cdot 10^{-4}\ m^2$

$B = \dfrac{\phi}{A} = \dfrac{480 \cdot 10^{-6}}{3,799 \cdot 10^{-4}} = \underline{1,263\ T}$

No 12.1.6

$B = \dfrac{\phi}{A} \Rightarrow A = \dfrac{\phi}{B} = \dfrac{0,026}{1,12} = \underline{0,01839\ m^2} = \underline{183,9\ cm^2}$

No 12.1.7

$A = L \cdot \ell = 0,022 \cdot 0,017 = 0,000374\ m^2 = 3,74 \cdot 10^{-4}\ m^2$

$\phi = B \cdot A = 1,8 \cdot 3,74 \cdot 10^{-4} = \underline{0,0006732\ Wb} = \underline{673,2\ \mu Wb}$

No 12.1.8

a) $B = \dfrac{\phi}{A} \Rightarrow A = \dfrac{\phi}{B} = \dfrac{0,00105}{1,47} = \underline{0,0007143\ m^2} = \underline{714,3\ mm^2}$

$L = \dfrac{A}{\ell} = \dfrac{714,3}{23} = \underline{31,05\ mm}$

№ 12.1. 9

$\Phi = 3,82$ m Wb

$\Phi = 0,00382$ Wb

$A = 42,2$ cm²

$A = 0,00422$ m²

$$B = \frac{\Phi}{A} = \frac{0,00382}{0,00422} = \underline{0,9052 \text{ T}}$$

№ 12.1. 10

$(A = L \cdot \ell = 200 \cdot)$

$$\ell = \frac{\pi \cdot \phi}{4} = \frac{3,14 \cdot 150}{4} = 117,8 \text{ mm}$$

$$A = L \cdot \ell = 200 \cdot 117,8 = 0,02356 \text{ m}^2$$

$$\Phi = B \cdot A = 1,25 \cdot 0,02356 = \underline{0,02945 \text{ Wb}} = \underline{29,45 \text{ m W}}$$