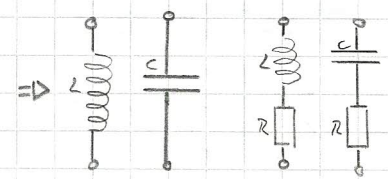
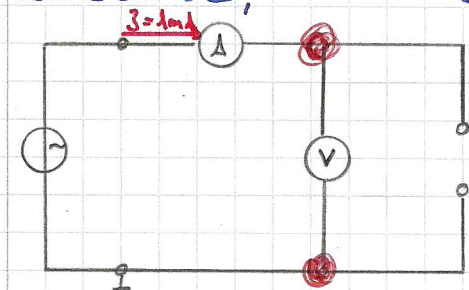


$R = 330 \Omega$ ;

$C = 3,3 \mu\text{F}$



$Z = \frac{U_{\text{eff}}}{I_{\text{eff}}} = \frac{U}{I}$

Unabhängig von Amplitude!  $\Rightarrow U \uparrow \Rightarrow I \uparrow$

①  $I = 1 \text{ mA}$

$U$  wird in mV gemessen!

$Z_L = \frac{U_L}{I}$   
 $Z_C = \frac{U_C}{I}$

Stromwiderstand selbst ermitteln!

$f/\text{Hz}$	50	100	200	300	400	500	750	1000	
$Z_L/\Omega$	33,57	66,52	126,87	188,25	258,67	319,99	478,93	635,6	✓
$Z_C/\Omega$	996	487,54	240,87	161,85	123,35	100,11	68,51	48,55	✓
$L/\text{mH}$	107	106	101	100	103	102	102	101	Mittelwert 103
$C/\mu\text{F}$	3,2	3,3	3,3	3,3	3,2	3,2	3,1	3,3	3,2

$Z_C = \frac{1}{\omega C} = \frac{1}{2\pi f \cdot C} \Rightarrow C = \frac{1}{2\pi f \cdot Z_C} = \frac{1}{2\pi \cdot 50 \text{ Hz} \cdot 996 \Omega} \approx \underline{\underline{3,2 \mu\text{F}}}$  ✓

$Z_L = \omega \cdot L = 2\pi f L \Rightarrow L = \frac{Z_L}{2\pi f} = \frac{33,57 \Omega}{2\pi \cdot 50 \text{ Hz}} = \underline{\underline{107 \text{ mH}}}$  ✓

Graphisch side Diagramm!

